A. DEMOGRAPHIC INFORMATION

NAME _____ A #__ __ - __ __ __ - __ __ __ NATIONALITY _____
Family First Middle

ADDRESS_____ VOLAG_____ ARR DATE ___/___/___ SEX __ M __ F

_____ TEL (_____)_____ BIRTH DATE ____/____/____

PURPOSE

To ensure that demographic data are collected and recorded correctly

PROGRAM REQUIREMENTS

The following information is to be completed on the RHAP form:

NAME:
- Record clearly – family (last) name and given names.

ALIEN NUMBER:
- Record alien number.

NATIONALITY:
- Record the country of origin. (Note: Religion is not the same as nationality.)

ADDRESS:
- Record current address. (May need to be updated.)

VOLAG:
- Record the name of the agency that scheduled the appointment. If none, record the referral source (generally RIHP).

TELEPHONE:
- Record a current phone number.

ARRIVAL DATE:
- Record the date of entry into the U.S.
- Note if the refugee is a secondary migrant in Massachusetts. A secondary migrant is one who settled elsewhere in the U.S. (even for as little as one day, except for transit stops at the quarantine sites) before moving to Massachusetts.

BIRTH DATE:

- Record as MM/DD/YYYY. (Note: Some records from overseas may be in DD/MM/YY or YY/MM/DD format.)

SEX:

- Record sex: M or F

At both visits, clinic staff should confirm demographic information with refugee families. This information is essential as RIHP outreach educator staff often rely on the information on the RHAP form when arranging contact with a family. Many refugee families will move after their first few weeks in the U.S. The information supplied on the RHAP form allows RIHP to update its demographic data for these families.

B. REVIEW OF THE OVERSEAS MEDICAL EXAMINATION

OVERSEAS MEDICAL EXAMINATION	Class A / Class B Conditions	Diagnosis Confirmed	Comments
	1. _____	__ Yes __ No	_____
OF-157 Reviewed __No __ Yes	2. _____	__ Yes __ No	_____
IOM Bag Reviewed __No __Yes	3. _____	__ Yes __ No	_____
Notes: _____			

PURPOSE

To review findings from the overseas visa medical examination (as reported on the OF-157 Form, the Overseas Medical Examination of Applicants for U.S. Visas, as well as other documents) and follow up on identified conditions

BACKGROUND

Overseas health screenings are conducted to ensure that refugees do not have conditions that would exclude them from entering the United States. These medical exclusions include certain communicable diseases and mental health conditions associated with violence. Refugees with communicable diseases that preclude their entry into the country may be delayed until appropriate treatment is initiated and they are no longer infectious. Following treatment, refugees will be allowed to emigrate to the United States. Waivers may be requested for conditions that are grounds for exclusion. Medical conditions are categorized as Class A or B.

Class A

Class A conditions are defined as those conditions which preclude a refugee from entering the U.S. Class A conditions require approved waivers for United States entry and immediate follow-up upon arrival. These conditions include communicable diseases of public health significance, mental illnesses associated with violent behavior, and drug addiction.

Class B

Class B conditions are defined as significant health problems: physical or mental abnormalities, diseases, or disabilities serious in degree or permanent in nature amounting to a substantial departure from normal well-being. Class B conditions require follow-up soon after arrival in the United States.

The following table summarizes the classifications of various diseases:

Overseas Classifications	
Class A	Chancroid, Gonorrhea, Granuloma inguinale, Lymphogranuloma venereum, Syphilis
	Tuberculosis, active, infectious
	HIV infection
	Hansen's disease, infectious (leprosy)
	Mental illness with violent behavior
	Drug addiction
Class B	Tuberculosis (B1-active, not infectious; B2-inactive, old; B3-any possible past TB disease)
	Hansen's disease, not infectious
	Other significant physical disease, defect, or disability

The overseas medical examination is done by a local panel physician or by a physician working under contract to the International Organization for Migration, using locally available facilities (laboratory, x-rays). The Division of Quarantine (DQ), CDC, is responsible for oversight of all overseas examinations.

Protocol

The summary protocol for the overseas visa medical examination is as follows:

- Medical history and physical examination.
- Chest x-ray for age ≥15 years. (For Southeast Asian refugees, the age is ≥2 years.)

  Sputum smear for acid-fast bacilli, if the chest x-ray is suggestive of clinically active TB.
- Serologic test for syphilis for age ≥15 years. Persons with positive results are required to undergo treatment prior to departure for the U.S. Also physical exam for evidence of other STDs or HIV infection.

- HIV antibody testing for age ≥15 years. Pre- and post-test counseling are part of the testing process.

- Physical exam for signs of Hansen's disease. Refugees with laboratory-confirmed Hansen's disease are placed on treatment for six months before they are eligible for travel to the U.S. Generally, treatment must be continued in the United States.

A determination is made regarding whether or not a refugee has a mental disorder. Physicians rely on a medical history provided by the patient and his/her relatives and any documentation such as medical and hospitalization records.

Results are recorded on the overseas visa medical examination form (OF-157).

The quality of the overseas visa medical examination varies and depends on such factors as the site of the examination, the panel of physicians, and the length of time for which the examination process has been in place at a given location. The visa medical examination is valid for one year prior to departure.

The International Organization for Migration (IOM)

The IOM is an intergovernmental body, based in Switzerland, that manages refugee movements for third country resettlement. In addition, IOM performs many of the overseas health assessments in the former Soviet Union and Vietnam, as well as some in Sub-Sarahan Africa.

IOM • OIM

The IOM provides each refugee with a white plastic bag that contains the individual's medical records and x-rays. Currently, the IOM bag should contain the OF-157 form and supplemental vaccine form. At times, IOM officials will add other supplemental forms to document the medical history based on the situation a refugee is coming from. Recent examples include documentation of varicella vaccination in the case of an outbreak and pre-embarkation treatment for malaria or parasitic infections.

Division of Quarantine, CDC

The Division of Quarantine (DQ), CDC and Prevention, is in the process of revising the content and documentation of the overseas evaluation. The CDC revisions will include greater evaluation of children under the age of 15 years. After finalization of these revisions, refugee documents should include the core form as well as extended worksheets to document findings that indicate need for follow-up care in the United States.

For a detailed guide to the overseas examination, refer to:

Technical Instructions for Medical Examination of Aliens. Atlanta: CDC, 1992.

This document and immunization appendices are available on the CDC website (linked via "References and Readings"): www.cdc.gov

RHAP clinicians should keep in mind that the focus of the overseas visa medical examination is not to identify all the health conditions a refugee might have, but primarily to ensure that an individual does not have an excludable condition.

Refugees may not understand why they have to see a doctor now if they have recently seen one overseas and 'passed' the medical examination. Explain that the RHA is for the benefit of the refugee and is more comprehensive than the overseas exam. This is also a good time to start introducing the concept of preventive care.

PROGRAM REQUIREMENTS

1. Review OF-157 and contents of the IOM Bag.

2. Record and evaluate Class A/B medical conditions identified during the overseas medical examination and documented on the OF-157.

ALL PERSONS WITH **CLASS A/B TB** CONDITIONS REQUIRE REFERRAL TO STATE TB CLINICS

3. Confirm, or reject, overseas diagnoses. If further evaluation is needed to confirm any diagnosis, refer the patient for evaluation as appropriate.

4. Assess immunization records carefully. Doses received and dates should be analyzed. Record in the **IMMUNIZATIONS** Section of the RHA form. Be sure to

record the doses in the proper cells of the immunization table.

5. Evaluate other medical records.

What if overseas records are not available?

This is generally due to one of the following situations:

A. *Records available but forgotten*: Ask your patient if he/she can bring records to the next visit. Make clear that it is very important for the purpose of the health assessment to review these records. Proceed with the health assessment. While clinicians may opt to defer immunizations to the second visit if a family says they have documentation at home, most refugees will need some level of vaccination. Such deferment has been known to cause delayed school entry for children and missed opportunities for vaccination for all refugees. Therefore, RIHP discourages the practice.

B. *Only some records available.* As above, request the patient to bring records to the next visit. Frequently this scenario will involve lack of immunizations documentation, which is addressed in Section III-G of this manual.

C. *No records available*: On occasion, medical records do not travel with a refugee. In this situation, try to get as much information as you can. On the RHA form, the provider should check off that the OF-157 was not reviewed. The situation involving lack of immunization documentation is addressed in Section III-G of this manual.

RESOURCES

Division of Quarantine
Centers for Disease Control and Prevention
Atlanta, GA
(404) 639-8100
www.cdc.gov/ncidod/dq

International Organization for Migration
Geneva, Switzerland
www.iom.ch

C. THE MEDICAL HISTORY AND PHYSICAL EXAMINATION

PURPOSE

To perform a complete, detailed history and physical examination for all refugees to ensure diagnosis and treatment of conditions not previously detected as well as those treated previously but ineffectively

BACKGROUND

Many refugees may have received little or no medical care in the past. While the RHAP is a screening program, clinicians should be cognizant that their assessment may be the first full medical evaluation the refugee patient has had. Clinicians should therefore perform a general history and physical exam. It is recognized, however, that an extended history may not be necessary. Instead, clinicians should focus on historical elements which may be particular for refugees. These may include, for example, migration history and history of trauma.

Clinicians should also recognize that the RHAP encounter may be a new cultural experience for many refugees and will provide a profound first impression about health care in the U.S. As such, sensitivity toward the patient's gender, culture, and similar issues is very important.

THE MEDICAL HISTORY

The aim of taking the medical history is to record any significant past or current medical condition or disability as well as preventive care such as immunizations and dental work, and document any relevant family history. During this process, it may be possible to detect an obvious speech or hearing problem and to assess the patient's mental status. Clinicians should try to be concise about the sequence of historical events as they may provide clues to the refugee patient's risk for certain medical conditions, particularly infectious diseases, psychological problems, and growth/nutritional abnormalities.

1. BIOGRAPHICAL DATA
   - ✓ Brief family tree as appropriate
   - ✓ Migration history, including stays in refugee camps

2. PRESENT HEALTH STATUS
   - ✓ Chief complaint, if any

3. CURRENT HEALTH DATA
   - ✓ Currrent medications: Type
     Dosage
     Problems
   - ✓ Allergies: Drugs, food, etc…
   - ✓ Last examination: Physical

Dental
Vision
Hearing
ECG
Chest X-ray
Pap smear

✓ Immunization Status: Update, Due

4. PAST HEALTH STATUS

Summarize and record chronological data as completely as possible. The following list provides some examples for each category.

✓ Child devel. milestones	Speech, gross motor, fine motor, socioemotional
✓ Childhood illnesses	Measles, rubella, mumps, pertussis, scarlet fever, chicken pox, strep. throat
✓ Serious or chronic illness	Malaria, chronic hepatitis, hypertension, diabetes, tuberculosis, asthma, kidney or cardiac problems, seizures, obesity, etc.
✓ Serious physical trauma	Head injuries, fractures, burns, trauma, torture
✓ Hospitalizations	Length of stay, and place
✓ Transfusions	Dates, indications
✓ Surgery	Year/age and place; female genital circumcision/ mutilation, ritual scarring or branding
✓ Dental care	Prophylaxis, restorative work, use of fluoride in water and toothpaste, brushing, flossing
✓ Emotional stress/ mental illness	Symptoms, diagnoses, treatments, loss of family, exposure to war/other violence (see #6 below)
✓ Obstetrical hx	Number of pregnancies, births,

still-births, abortions, complications

5. REVIEW OF SYSTEMS

Can be incorporated into the physical exam. See below.

6. PSYCHOSOCIAL HISTORY

Refugees are at very high risk for depression, anxiety, post-traumatic stress disorder, and substance use. Assess the patient's feelings about him/herself, and ability to cope with resettlement: stress, losses, isolation, depression, insomnia, anorexia, drug/alcohol/smoking use and abuse, nightmares, flashbacks.

In children, non-specific somatic or behavioral symptoms may indicate problems such as depression, adjustment disorder, or post-traumatic stress disorder. These symptoms may include withdrawal, acting out, new fears, anorexia, somatic complaints, nightmares and sleep disturbances, separation fears, enuresis, or developmental regression.

THE PHYSICAL EXAMINATION AND REVIEW OF SYSTEMS

The overseas medical evaluation is geared toward identifying excludable conditions in refugees. It is not a comprehensive physical for preventive medical care. Consequently, the RHA starts the process of comprehensive care with an emphasis on primary care and preventive medicine. The physical exam should thus be general, not focused.

During the examination, providers should be considerate of refugees' cultural and religious beliefs and accommodate them as possible. For example, an Islamic woman may not wish to be examined by a male physician. If using interpreters, bear in mind that the gender of the interpreter should similarly be considered, such that those of opposite gender from the patient may need to stand behind a curtain or screen, and that in some instances the patient may not wish to speak freely in front of an interpreter of different gender.

General Fatigue, weakness, fever, sweats, frequent colds, infections or illnesses, ability to carry out activities of daily

	living, mobility, apparent anxiety, general hygiene, dress
Nutritional	Type of diet, hx of weight gain or losses, growth charts for children, body habitus
Skin	Skin lesions (wounds, sores, ulcers), tumors or masses, pruritus, edema, cyanosis, jaundice, nevi, hyper/hypopigmentation, scars (esp. consistent with torture, such as cigarette or electrical burn scars), palor, tattoos, clinical signs of Hansen's disease
Head	Headache, syncope, dizziness, hx or sx of trauma
Eyes	Corneal opacity, cataracts, pterygium, nystagmus, jaundice, trauma; Visual acuity to be documented with the Snellen E chart
Ears/mouth	Otoscopy, inspection of mouth and throat, tooth loss, caries, ulcers, trauma
Neck	Node enlargement, masses, thyroid, stiffness
Breast	Pain or tenderness, nipple discharge, lumps
Cardiovascular	Chest pain, palpitations, dyspnea on exertion, orthopnea Exam: murmurs, rubs, gallops, pulses, perfusion, edema, blood pressure, heart rate
Respiratory	Chronic cough, sputum production, night coughing, dyspnea of exertion; Exam: Presence of rhonchi, rales, wheezes, rubs, clubbing of extremities; TB symptoms: night fever, cough, weight loss, night sweats, hemoptysis
Hematolymphatic	Anemia, bleeding, fatigue, lymph node enlargement
Gastrointestinal	Abdominal pain, nausea, vomiting, diarrhea, constipation, jaundice, change in bowel habits, ascites

	Record recent dietary and travel history in the presence of diarrhea and other symptoms Exam: check for hepatosplenomegaly and masses
Urinary	Dysuria, pyuria, hematuria, incontinence, enuresis, polyuria/polydypsia
Genital	STD history, discharges, pain, pruritus, burning Female: LMP, menarche/menopause, bleeding, female genital mutilation Male: scrotal lumps, testicular self-examination
Musculoskeletal	Muscles, extremities, gait, bones and joints, gross disfigurement, sx of trauma Movement: gait, any limitation of movement or coordination, tremor, body symmetry
Nervous System	History of seizure, stroke, or speech problems, head trauma Evaluate cranial nerves, cerebellar function, sensorium, strength, reflexes, tone
Endocrine	Thyroid, diabetes

Write abnormal findings in the **COMMENTS/REFERRALS** section of the RHAP form (see Section III-I). Because space is limited, do not record normal findings or non-specific symptoms that do not strongly suggest a probable diagnosis.

NOTE ON CHILDREN

When performing a history and physical examination on refugee children, it is important to remember that they will have the same levels of fear and anxiety encountered in US children of the same ages. Attention should be paid to reassuring and calming the child as best as possible during the exam. In addition, as refugee children are at high risk for developmental delay and behavioral issues, whenever possible, the provider should incorporate an assessment of the child's developmental stage using standardized historical and exam milestones such as can be found in the Denver Developmental Screening Test.* Lastly, it is known that refugee children have high prevalences of malnutrition and growth retardation. Providers should use standardized growth

charts* and refer families to WIC and other nutritional support programs as needed.

**See Appendices H & I for copies of the NCHS growth charts and DDST. Growth charts may be downloaded from: http://www.cdc.gov/nchs/about/major/nhanes/growthcharts/charts.htm.*

D. TUBERCULOSIS

TUBERCULOSIS PPD _____mm Date Planted ___/___/___ Date Read ___/___/___

Overseas Chest X-ray ___Normal ___Abnormal Date ___/___/___

TB Clinic Referral Site _____ Appt Date ___/___/___

PURPOSE

To ensure effective prevention and control of tuberculosis (TB) among newly arrived refugees in Massachusetts

BACKGROUND

Tuberculosis is a major worldwide public health issue. TB is The leading infectious cause of death worldwide and, according to the World Health Organization, there are over 8 million cases of TB and approximately 3 million deaths annually. More than 95% of these cases occur in developing countries. In 1995, over one million new cases and 450,000 deaths were among children under 15 years of age.[1]

For decades, TB rates declined steadily in United States but several complex social and medical factors caused TB morbidity to increase 14% from 1985 through 1992, when the decline of TB resumed. In Massachusetts, 270 new cases of active TB were reported in 1999 (case rate: 4.49 per 100,000 population). This represents a 5% decrease from 1998 and a 38% overall decline in the case rate since 1992. Among the new cases in 1999, 187 (69%) occurred in persons born outside the U.S. Over the years, persons born outside the U.S. have gradually accounted for a greater proportion of the TB cases in Massachusetts (1984 – 35%; 1992 – 51%; 1999 – 69%). While the proportion of cases occuring in persons born outside the U.S. has increased, the absolute numbers of such cases has been stable since 1993.

Transmission of TB is person to person through the air by droplet nuclei particles 1-5μm in diameter that contain *Mycobacterium tuberculosis*. Droplet nuclei are produced when an individual with pulmonary or laryngeal TB coughs, sneezes, speaks or sings.

Latent TB infection (LTBI) occurs when an individual is harboring *M. tuberculosis* but does not have systemic or local manifestations of tuberculosis disease. Such individuals will usually have a positive PPD skin test.

[1]World Health Organization. 1996. Groups at Risk: WHO Report on the Tuberculosis Epidemic. World Health Organization, Geneva, Switzerland.

Disease occurs when an individual who is harboring *M. tuberculosis* develops clinical manifestations or has an abnormal chest X-ray. The most common radiological findings in pulmonary tuberculosis are upper lobe (often cavitary) lesions, increased density in the lung parenchyma, and regional (hilar or mediastinal) lymph node enlargement. Other findings can include other lymphadenopathy (particularly in the neck), pleural effusion, and lesions at other body sites.

In accordance with the current American Thoracic Society (ATS) and Centers for Disease Control and Prevention (CDC) guidelines, *Targeted Tuberculin Testing and Treatment of Latent Tuberculosis Infection*, refugees are at high risk for developing TB disease and would benefit by treatment of latent TB infection, if detected.[2]

PROGRAM REQUIREMENTS

Providers are responsible for tuberculin skin testing of refugee health assessment patients to identify *M. tuberculosis* infection.

1) Plant and read a PPD

Every individual, 6 weeks of age and older, should receive 0.1 ml of 5 tuberculin units (TU) PPD injected intradermally via the Mantoux technique and read by qualified personnel at 48 - 72 hours. Refugees with an overseas diagnosis of TB of any class based solely on an overseas chest x-ray should have a PPD planted and read. RHA providers may on a case-specific basis defer PPD skin testing of refugees with clear histories or documentation of treatment for clinical TB disease or documentation of a *positive* PPD overseas. (Refugees with a documented *negative* PPD should have the testing repeated during the RHAP.) Such a deferral should be recorded on the RHA form in the **COMMENTS/REFERRALS** Section.

Record the date the PPD is planted, the date read, and diameter of **induration** in millimeters across the forearm (perpendicular to the long axis) on the health assessment form. Record the absence of induration as 0mm. Erythema should not be measured. Only one dimension (perpendicular to the long axis of the forearm) should be measured and recorded.

When reading a PPD skin test, measure induration, not erythema.

[2] American Thoracic Society. 2000. Targeted tuberculin testing and treatment of latent tuberculosis infection. Am J Respir Crit Care Med. 161:S221-S247.

Logistics of TB screening vary in the state, with the responsibility for planting/reading the PPD assumed by the local health department in some areas. Specific refugee health assessment provider responsibilities are clearly outlined for each site in coordination with RIHP regional offices.

2) Interpret the PPD

The following are guidelines for interpreting PPD results for newly arrived refugees.

≥ 5 mm induration is considered positive for:

- Refugees who have had recent close contact with a known or suspected case of infectious TB
- Refugees with overseas chest x-rays consistent with active or previous TB
- Refugees with clinical evidence of tuberculosis
- Refugees with HIV infection or other immunosuppressive conditions

≥ 10 mm induration is considered positive for:

- Refugees with clinical conditions that make them high risk[3]
- Refugees from high prevalence countries (Africa, Asia except Japan, Central/South America, Mexico, Caribbean, Eastern Europe, Middle East)
- Refugees exposed to individuals who are HIV-infected, homeless, users of illicit drugs, medically indigent city dwellers, residents of nursing homes, incarcerated or institutionalized persons, and migrant farm workers
- Children under 5 years of age

Note on BCG Vaccination

The Massachusetts Department of Public Health, Division of Tuberculosis Prevention and Control, has a policy statement on BCG and PPD.[4] The policy states that PPD reactions should be interpreted without regard to BCG history in almost all circumstances. PPD reactions of 10mm or more in adults or children who are from high prevalence countries are likely to be due to TB infection.

[3]Diabetes mellitus, silicosis, post-gastrectomy, chronic renal failure, some hematologic disorders (e.g., leukemia and lymphomas), other specific malignancies (e.g. , cancer of the head, neck, lung), underweight by 15% of ideal body weight, age <5 years

[4]*BCG AND PPD*. Policy of the Massachusetts Department of Public Health, Division of Tuberculosis Prevention and Control. September 6, 1986.

The requirements of the RHAP are consistent with this policy, yet place an increased emphasis on acknowledging and discussing BCG. Providers should obtain a BCG history, including timing and number of vaccinations. Record BCG vaccination date(s) under **IMMUNIZATIONS** on the health assessment form. In the case of multiple BCG vaccinations, record the first and most recent doses and annotate with the total number of doses ever received, e.g., *3/12/66, 7/29/78 x3*.

Decisions around treatment for latent TB infection will take into account BCG history. Providers may want to cover the following points relative to BCG:

- BCG protects against the most severe forms of TB in infants and very young children. Protection against TB in the lungs in both children and adults is not proven.
- Nearly all countries where BCG is used have high rates of TB.
- Positive reactions to PPD are generally not due to BCG – first, not all persons who are vaccinated convert their PPD; second, the reaction to BCG is usually <10mm; and, third, the sensitivity (reaction) wanes over time.

3) Refer to TB Clinics as appropriate

The role of the provider during the health assessment is to determine whether or not a patient (regardless of age or gender) should be referred to a state TB clinic* for further evaluation. State TB clinics provide comprehensive services free-of-charge for Massachusetts residents who require evaluation, treatment and follow-up for tuberculosis.

**See Appendix D for a listing of TB referral clinics.*

Refugees meeting any of the following criteria must be referred to a state-funded TB clinic:

- Clinical evidence of TB
- Abnormal overseas chest x-ray consistent with TB (Class A TB/Class B TB) regardless of the PPD test result
- Having started preventive therapy or treatment for active tuberculosis while overseas
- Positive PPD result (regardless of age, gender or overseas chest x-ray) either from testing overseas or during the RHAP

Note that in Massachusetts all suspected active TB cases must be reported to the Massachusetts Department of Public Health. The 24-hour TB Case Reporting telephone number is **1-888-MASSMTB or 617-983-6989.**

TB Clinic Role

The purpose of TB clinics is to assess, evaluate, and determine treatment for all refugees with either an abnormal overseas chest x-ray or a positive PPD.

Refugees for whom treatment for latent TB infection is recommended may be managed at the primary care site following initial evaluation at the TB clinic. In such cases, the TB clinic will be available for further consultation.

Treatment guidelines are outlined in the ATS/CDC statement on testing and treatment.[5] Changes from earlier guidelines include:

- Increased emphasis on targeted testing among persons at high risk for progression to TB
- Revised treatment options for latent TB infection in adults, including
  - Isoniazid for 9 months
  - Rifampin and pyrazinamide for 2 months
  - Rifampin for 4 months
  - Isoniazid for 6 months (when 9 months is not feasible).

The recommendation for treatment of latent TB infection in children and adolescents is unchanged:

- Isoniazid for 9 months.

CHILDREN

Infants and young children with latent TB infection have, by definition, been infected recently, which places them at increased risk for progression to disease. Further, infants and young children are more likely than older children and adults to develop severe forms of TB, e.g., TB meningitis or disseminated TB. The risk for disease decreases gradually through childhood.

Treatment for latent TB infection is effective and well-tolerated in children. The recommended regimen for treatment in HIV-uninfected children is a 9-month course of isoniazid (INH) self-administered daily or by directly observed therapy (DOT) twice-weekly.[6]

[5] American Thoracic Society. 2000. Targeted tuberculin testing and treatment of latent tuberculosis infection. Am J Respir Crit Care Med. 161:S221-S247.
[6] Ibid.

As noted in the section on tuberculin skin testing and BCG, PPD reactions over 10mm in young children are, under nearly all circumstances, interpreted as resulting from TB infection. Likewise, the decision to treat a young refugee child with latent TB infection is not affected by the history of BCG.

TB diagnosis in children relies on tuberculin skin testing, chest radiograph, and evaluation for clinical symptoms and signs, and often follows discovery of an adult case. A child with a positive PPD, then, is a sentinel event potentially indicating an adult with active disease. However, one may not immediately be able to determine if exposed children are infected because the development of delayed-type hypersensitivity to TB infection may take up to 3 months. Clinical symptoms are often nonspecific, and chest radiographs are difficult to interpret though they remain the most reliable tool for diagnosing tuberculosis in children. Because the diagnosis of TB in children is often made on clinical grounds, both over- and under-diagnosis are possible. Routine laboratory tests are not helpful. Young children with disease rarely produce sputum as they are usually unable to expectorate voluntarily, and gastric aspirations result in a positive culture only 40 percent of the time.[7] Recent attempts to induce sputum through inhalation of nebulized hypertonic saline have proven successful, but the technique is not yet in common practice.

[7]Khan EA, Starke JR. Diagnosis of tuberculosis in children: increased need for better methods. *Emerging Infectious Diseases*. 1995;1:115-123.

ELDERLY

Providers should get an accurate history of previous TB exposure and an accurate medical history, including history of TB disease. There are co-existing medical conditions such as previous gastrectomy, diabetes mellitus, or on-going therapy with immunosuppressive drugs that may predispose reactivation of old infection or development of new foci of infection. Providers should maintain a high index of suspicion when assessing the elderly.

Many healthy elders react vigorously to PPD testing, especially in light of recent infection. However, TB skin test reactivity declines with age; therefore, TB reaction may develop slowly and not peak until approximately 72 hours. Furthermore, the PPD skin test reaction may be negative secondary to decline in delayed hypersensitivity with age.[8] Two-step testing with a second test planted a week or more after a negative test with minimal or no induration may often be positive because the initial test triggered immune memory cells. The positive second test indicates true TB infection, most likely from many years earlier. Note that 2-step testing is not a routine part of the refugee health assessment.

The ATS/CDC guidelines on treatment of latent TB infection consider all persons at high risk for developing TB as candidates for treatment, regardless of age. In addition to isoniazid, clinicians have treatment options with less hepatotoxic drugs that may be used with older patients.

Predominant symptoms of TB disease in the elderly are weight loss, cough (often non-productive), and progressive dyspnea. Treatment tends to be successful for pulmonary TB, though drug toxicity is higher among the elderly.

PREGNANCY

The clinical presentation of TB in pregnant women is similar to that in non-pregnant women and pregnancy does not increase the risk of progression to active disease. Providers should question pregnant women about symptoms and proceed to test with PPD routinely. If the PPD reaction is greater than 10mm induration (or as defined earlier for high risk criteria), the woman should be referred to a TB clinic for evaluation. If the patient does not have symptoms, a shielded chest x-ray may be obtained or delayed until after the 12th week of gestation.

[8]Medical Section of the American Lung Association. *Treatment of Tuberculosis and Tuberculosis Infection in Adults and Children*. American Thoracic Society, 1994.

Tuberculin skin testing is considered valid and safe throughout pregnancy.

A newly arrived pregnant refugee whose PPD test is positive, with a normal chest x-ray, is a candidate for treatment of latent TB infection. The infant does not require special evaluation for TB if the mother is asymptomatic.

A woman who has been diagnosed with active TB during pregnancy, and has been culture-negative for 3 months before delivery, poses little risk of infection to the newborn. The infant should have a PPD placed at 3 month intervals but does not require further evaluation, unless the PPD test is positive. If the mother has not been culture-negative for three months before delivery, the child should be evaluated by a TB specialist for possible congenital disease.[9] For care of the newborn, please refer to the *2000 Red Book: Report of the Committee on Infectious Diseases, 25th Edition,* or seek consultation from an infectious disease specialist.

ISSUES ASSOCIATED WITH TB

While the understanding of TB by any group of people varies considerably and reflects the group culture and socio-economic status, the social stigma of TB is nearly universal. The belief that a positive PPD is caused by BCG is a source of much confusion among refugees. Refugees who are identified as infected or diseased may have a difficult time accepting the diagnosis, particularly if there are no symptoms. It may ease a refugee's anxiety to learn that a third of the world's population is TB-infected and that infection could have occurred during their stay in an overcrowded refugee camp or during periods of unrest in their home country.

An empathetic bond with a refugee who is newly-identified as having latent TB infection or TB disease will help encourage compliance with preventive and curative protocols.[10] Cultural and behavioral factors affecting both parties, patients and providers, should be taken into account and an appropriate network of support and education should be provided to medical staff, patients and their families. Education should be aimed to empower people to understand the complex nature of tuberculosis and not just to promote adherence to medication regimens.

Socio-behavioral studies have demonstrated that people in developing countries tend to describe TB as a multi-causal

[9]American Lung Association.
[10]Thorensen CE. Overview. In: Matarazzo JD, Weiss SM, Herd JA, eds. *Behavioral Health: A Handbook of Health Enhancement and Disease Prevention*. John Wiley and Sons, 1984.

and multi-factorial disease.[11] As the disease can present in many ways and is greatly stigmatized around the world, symptoms are often attributed to other, more benign causes. Weight loss and fatigue can be attributed to hard work and lack of sleep. Also, loss of weight, back pain, intermittent headache, coughing, fatigue, or rhinorrhea can be attributed to *gripe* (common cold) or *susto* (fright illness) in some Latin American cultures. The same symptoms and signs can be attributed to *piang*, or weak lungs, in the Philippines and witchcraft in India. Such cultural attributions should be acknowledged by the provider.

RESOURCES

Division of TB Prevention & Control
Massachusetts Department of Public Health
305 South Street, Jamaica Plain, MA 02130
(617) 983-6970
www.magnet.state.ma/dph/

Division of TB Elimination
National Center for HIV/STD/TB Prevention
Centers for Disease Control and Prevention
Atlanta, GA 30333
(404) 639-8140
www.cdc.gov/ncsthp/tb

International Union Against TB & Lung Disease
68 boulevard Saint Michel
75006 Paris FRANCE
www.iuatld.org

Global TB Programme
World Health Organization
20 avenue Appia
1211 Geneva 27 SWITZERLAND
tuberculosis@who.int
www.whoint/gtb

[11] Jaramillo E. Anthropological issues and their impact on tuberculosis control in developing countries. Paper presented at the International Union Against Tuberculosis and Lung Disease (IUATLD), North American Regional Meeting, Chicago, March 1-2, 1996.

E. HEPATITIS B

HEPATITIS B	HBsAg ____ Neg _____ Pos	AntiHBs ____ Neg ____Pos

PURPOSE

To reduce the risk of hepatitis B transmission by:

- Identifying hepatitis B carriers
- Providing risk reduction education, and
- Identifying and vaccinating susceptible contacts, children through 18 years of age, and high-risk adults

BACKGROUND

Hepatitis B virus (HBV) infection is highly endemic in Southeast Asia, most of the Pacific Islands, Sub-Saharan Africa, the Amazon Basin, Eastern Europe, part of the Middle East, some Caribbean islands, and China. In these areas, most infections occur in infants or children under age 5, and 70% to 90% of the population have been infected by adulthood. The prevalence of chronic infection in these populations is estimated to be between 8% to 15%. In the United States, approximately 1-1.25 million persons are infected with HBV. An estimated 5,000 persons with chronic HBV infection die each year as a result of chronic liver disease (cirrhosis and liver cancer).[12]

PROGRAM REQUIREMENTS

All blood tests, including HBsAg and anti-HBs, should be done at the first visit. Testing for anti-HBc is neither required nor recommended for RHAP screening. Vaccination should be initiated as described later in this section.

The following sections describe the evaluation of hepatitis B infections in general and is intended to be used as a reference. The scope of its recommendations go beyond RHAP requirements that are designed to discriminate between virus carriers and susceptible contacts.

EVALUATING FINDINGS

Serologic markers of HBV vary depending on whether the patient is infected and the infection is acute or chronic. HBsAg can be detected as early as 1 or 2 weeks and as late as 11 or 12 weeks (usually 30-60 days) after exposure to HBV. In persons who recover, HBsAg is no longer detectable in serum after a period of about 3 months. Anti-HBs IgG becomes detectable during convalescence in patients who do not

[12]Recommendations of the Immunization Practices Advisory Committee. Hepatitis B virus: a comprehensive strategy for eliminating transmission in the United States through universal childhood vaccination. *MMWR*. Nov. 22, 1991;40(No. RR-133):1-25.

progress to chronic infection. The presence of anti-HBs antibodies following acute infection generally indicates recovery and immunity from reinfection.[13] Virtually all patients with past HBV infection will have core antibodies (anti HBc) as well, although this does not necessarily indicate immunity.

During the second visit, review the lab results with your patient. Determine if the patient is immune, a HBV carrier, or susceptible to infection. Proceed to educate, vaccinate, and refer to primary care as appropriate.

It is important to review other family and household members' lab results, as household contacts are at risk of transmission of hepatitis B virus.

REPORTING

Hepatitis B is a condition that is reportable to the local health department.

Clinicians are reminded to comply with the Commonwealth's regulations regarding reporting of certain diseases to either local or state public health officials as required by state law (105 CMR 300.00).
See Appendix F for a listing of reportable diseases.

INTERPRETING RESULTS

The following charts summarize interpretation of individual and panel hepatitis B serologic tests.

Interpretation of Individual Positive HBV Tests

Serologic Test	Interpretation	Follow-up Needed
HBsAg	*Hepatitis surface antigen positive* Infectious. If positive for more than 6 months, patient is a chronic carrier.	Vaccinate family and/or close contacts. Further serologies and LFT's in follow-up care. Educate re: transmission.
IgM anti-HBc	*Hepatitis B IgM core antibody positive* Recent infection	Test for IgG anti-HBs Vaccinate contacts

[13]Recommendations of the Immunization Practices Advisory Committee. *MMWR*. pp 1-25.

Interpretation of Individual Positive HBV Tests *(continued)*		
IgG anti-HBs (aka: anti-HBs or HBsAb)	*Hepatitis B surface antibody positive* Immune by past infection or immunization	None. Finish vaccine series if in process (i.e., 1 or 2 doses received prior to test).
IgG anti-HBc (aka: anti-HBc)	*Hepatitis B total core antibody positive* Past infection. Does not necessarily indicate immunity.	Test for IgG anti-HBs
HBeAg	*Hepatitis B e-antigen positive* Highly infectious	Test for clearance, other serologies, LFT's, and IgG anti-HBs

Interpretation of HBV Panel Results

Tests	Results	Interpretation
HbsAg IgG anti-HBc IgG anti-HBs	- - -	Susceptible
HbsAg IgG anti-HBc IgG anti-HBs	- - or + +	Immune
HBsAg IgG anti-HBc IgG anti-HBs	+ + -	Acute or chronic infection
HBsAg IgM anti-HBc IgG anti-HBc IgG anti-HBs	+ + - -	Acute infection
HBsAg IgG anti-HBc IgG anti-HBs	- + -	Indeterminate

A diagnosis of acute HBV infection can be made on the basis of the detection of IgM class antibody to hepatitis B core antigen (anti-HBc IgM). Positive HBeAg correlates with higher titers of HBV and infectiousness. A chronic carrier is an individual with HBsAg for more than 6 months and should be considered infectious. In the case of acute hepatitis B, prophylaxis is required for sexual contacts. Hepatitis B immune globulin (HBIG) 0.06 ml/kg IM and hepatitis B vaccine can effectively prevent infection after exposure to the virus.

EDUCATION FOR HEPATITIS B CARRIERS

HBV transmission occurs via percutaneous or mucosal routes; infective blood or body fluids can be introduced transplacentally or at birth, through sexual contact, by contaminated needles, and in some instances by casual household contact. HBV is not transmitted via the fecal-oral route.

Teach your patient about risk reduction measures:

- Cover all cuts and open sores with a bandage.
- Throw away used personal items such as tissues, menstrual pads, or tampons in paper bags.
- Wash hands well after touching blood or body fluids.
- Clean up blood spills. Clean the area with a bleach solution (1 part bleach and 9 parts water).
- Do not share toothbrushes, razors, needles for ear piercing, earrings, nail files, clippers, scissors, or anything that may come in contact with blood or body fluids.
- Do not donate blood, plasma, body organs, other tissues, or semen.

Chronic carriers should be advised to have liver tests monitored regularly to determine whether disease is progressing (chronic active hepatitis) or treatment is needed. A referral to primary care should be arranged.

If a sexual partner of a HBV carrier is not immune, discuss the use of condoms for sexual contact. HBV carriers should also be encouraged to inform medical and dental care providers about their HBV status both to encourage proper infectious disease precautions and to ensure appropriate follow-up evaluation.

VACCINATION

Current recommendations from MDPH call for the vaccination of all children through age 18 years and high risk adults[14]. The following are some adult high risk categories:

- Refugees from hepatitis B endemic regions, such as Sub-Sarahan Africa, Southeast Asia, and Haiti
- Household contacts and sexual partners of HBV carriers
- Sexually active heterosexuals with multiple partners in the past 6 months or past STD

[14] High risk adults are only eligible for MIP-supplied vaccine at “public provider sites” including RHAP clinical sites.

- Sexually active homosexuals
- Residents of chronic or long-term care facilities

To avoid missing opportunities for vaccination of all children and adult high-risk individuals, these individuals should receive the first dose of HBV vaccine at the first RHAP visit. If serologies show immunity, no further doses are needed.

For additional information on hepatitis B vaccination of high risk adults, please contact the Massachusetts Immunization Program.

RESOURCES

Massachusetts Immunization Program
Massachusetts Department of Public Health
(617) 983-6800
www.magnet.state.ma/dph/cdc/epiimm2.htm

Hepatitis B Coalition / Immunization Action Coalition
1573 Selby Avenue #234
St Paul, MN 55104
(612) 647-9009
www.immunize.org

American Liver Foundation
(800) 465-4837
www.liverfoundation.org

Hepatitis Branch, CDC
(888) 443-7232
www.cdc.gov/ncidod/diseases/hepatitis/index.htm

F. PARASITIC INFECTIONS

PARASITIC INFECTIONS (Stool O & P): Record treatment in the "Medications Prescribed" section.

_____ None Identified	_____ Ascaris	_____ Giardia	_____ Strongyloides
	_____ Blastocystis	_____ H.nana	_____ Trichuris
	_____ E.histolytica	_____ Hookworm	_____ Other _____

PURPOSE

To identify and treat intestinal parasitic infections

BACKGROUND

The worldwide prevalence of parasitoses is staggering. Over one billion persons worldwide are estimated to be carriers of *Ascaris*. Approximately 480 million people, or 12% of world population, are infected with *Entamoeba histolytica.*[15] At least 500 million carry *Trichuris*. At present, 200 to 300 million people are infected with one or more of *Schistosoma* species, and it is estimated that more than 20 million persons throughout the world are infected with *H. nana*.[16] In the United States, it is estimated that approximately 65 million or more people are infected with intestinal parasites. The enormous morbidity from parasitoses is a reflection of the number of people infected. Consequences of parasitic infection include anemia due to blood loss and iron deficiency, malnutrition, growth retardation, invasive disease, and death. Parasitic infections are frequently detected in refugees; however, the types of organisms found will vary with the geographic origin of the refugee. The most common pathogens found in refugees resettled in Massachusetts are *Giardia* (45% of pathogenic parasites, *Trichuris* (33%), *E.histolytica* (9%), and *Ascaris* and hookworm (each 5%).

PROGRAM REQUIREMENTS

First visit

All refugees should have a stool sample screened for ova and parasites (O&P). Instruct on actual specimen collection and give kits to patients. Suggest that your patient bring back stool in 2-3 days, when she/he is coming for the PPD reading. Some sites offer patients the option of mailing stools directly to the lab. The stool results should be available for the second visit.

[15]Bruckner D. Amebiasis. *Clinical Microbiology Reviews*. 1992;5:356-369.
[16]Katz M, Et al. *Parasitic Diseases, Second edition*. Springger-Verlag, 1989. p 96.

Between visits

Review lab results. Write and pre-fill prescriptions for medications to treat pathological intestinal parasites. Prescribe through a pharmacy affiliated with your program to ensure that the patient is not billed for antiparasitic medications.

Second visit

Describe the findings to the patient. If positive results for a pathological parasite, discuss treatment with your patient. Give the pre-filled medication to the patient and describe how to take medications. Single dose medications should be taken at the clinic visit whenever possible. Discuss the need for follow-up. In addition, clinicians have the option of supplemental testing with up to 2 additional O & P's for patients with eosinophilia or other clinical findings suggestive of parasitoses.

EVALUATING FINDINGS

The health assessment program requires examination of stool to detect parasites. If parasites other than those listed on the health assessment form are identified, please list by name under "*Other."*

Decisions concerning management of an individual patient require experience with the different clinical characteristics of the various parasitic infections. The usual sites of the parasite infection in the host are often apparent, but certain parasites' life cycles will take them to other parts of the human body where they may or may not cause symptoms. The existence of a tissue-invasive parasite should be considered in patients with peripheral eosinophilia.

The geographic distribution of parasitic infections is varied, and knowledge of distributions is of great value to knowing what to look for in a patient. Information such as refugee migration, food habits, lack of shoes, lack of potable water, quality of sanitation, and history of insect bites are helpful in ruling-out or -in parasitic infections. Tissue invasion may produce fever, headache, pain, chills, nausea and vomiting. Pressure from growing parasites may give rise to pain. In the brain, parasitic infection might cause various motor and sensory abnormalities, including seizures. Parasites may obstruct the intestine, bile ducts, lymph channels, and capillaries of the brain and other organs causing serious problems. Extensive anemia may be produced by red cell destruction, blood loss, or supression of hematopoiesis.

Clinicians are reminded to comply with the Commonwealth's regulations regarding reporting of certain diseases to either local or state public health officials as required by state regulations (105 CMR 300.00).
See Appendix F for a listing of reportable diseases.

The following is a brief guide to the life cycle, pathology, symptomatology, and treatment of parasites most commonly seen in refugee populations:

Ascaris

Ascaris lumbricoides (Roundworm)

Ascaris is the largest intestinal roundworm in humans (8-12 inch in length). Infections are common world-wide, but mostly in the tropics, in areas with poor sanitation, and wherever human feces are used as fertilizer. Nonspecific gastrointestinal symptoms are reported in some patients. If the infection goes untreated, adult worms can live for as long as 12 to 18 months. **Patients with multiple parasites including *Ascaris* should always receive treatment for *Ascaris* first, due to the risk of migration of the worm in response to noxious stimuli.**[17]

Blastocystis

Blastocystis hominis (Protozoan)

Blastocystis is present in many healthy, asymptomatic individuals with stool microscopy showing fewer than three trophozoites per high powered field. It is often considered non-pathogenic. Infrequently, any of the following symptoms may occur: mild diarrhea (two to four soft stools per day), abdominal pain, nausea, anorexia, fatigue, bloating, cramps, or alternating diarrhea and constipation.[18] Treatment should be reserved for immunocompromised patients who are symptomatic and in whom no other pathogen or process is found to explain gastrointestinal symptoms.

Clonorchis

Clonorchis sinensis (Fluke)

Clonorchis is commonly known as the Oriental liver fluke. Humans get infected by eating uncooked fish containing infectious metacercariae and by ingestion of cysts in drinking water. The parasites live in the distal bile ducts and irritate them by mechanical force and toxic secretions. Depending on the severity of the infection (may be up to thousands of worms), the liver may become enlarged and tender. The bile ducts gradually thicken, becoming dilated and tortuous. Adenomatous transformation of the biliary epithelium develops. Light infections, however, may produce only mild symptoms or go unrecognized. As additional worms are acquired, indigestion and epigastric discomfort (unrelated to meals), weakness, and weight loss become noticeable. In

[17] *1997 Red Book*. pp 142-143.
[18] *1997 Red Book*. pp 153.

heavy infection, anemia, liver enlargement, slight jaundice, edema, ascites, and diarrhea also develop. In late stages, tachycardia, palpitations, vertigo and mental depression may ensue.[19]

E. histolytica

Entamoeba histolytica (Protozoan)

Entamoeba histolytica occurs in both pathogenic and non-pathogenic strains. Pathogenic strains may penetrate the epithelial tissue of the colon causing ulceration (amebic dysentery). In some cases, organisms that reach the liver by the portal bloodstream produce abscesses (hepatic amebiasis). The onset of symptoms of amebic liver abscesses can be abrupt or insidious. Fever and localized abdominal pain are almost always present. Right shoulder pain usually indicates referred pain from diaphragmatic irritation. The liver is usually tender to palpation. In a fraction of these cases, amoebae may spread to other organs such as the lungs, brain, kidney or skin, with a high fatality rate.[20]

Giardia

Giardia lamblia (Protozoan)

Giardia is a flagellate protozoan that exists in trophozoite and cyst forms; the cyst form is resistant to drying and other environmental effects and is infectious. Infection is limited to the small intestine and/or biliary tract. It is transmitted through food and water contaminated by sewage, food handlers with poor hygiene, and through other fecal-oral routes. Infection is more common in children than in adults, particularly in the 6-10 year age group. Patients with clinical illness may develop acute watery diarrhea with abdominal pain, or they may experience a protracted, intermittent, disease which is characterized by passage of foul-smelling diarrhea or soft stool associated with flatulence, abdominal distention, and anorexia.[21]

Hookworms

Ancylostoma duodenale and Necator americanus

Hookworm eggs are passed in the stool and then hatch in warm, moist soil, releasing rhabditiform larvae that develop within a few days into filariform larvae. No free-living adult forms exist. Filariform larvae invade the skin and migrate through venous blood to the heart and then the lungs, where they penetrate into alveoli and migrate via the trachea into the gastrointestinal system. Once the larvae reach the small intestine, they mature into adults that attach themselves to the

[19]Brown, pp 222-225.
[20]*1997 Red Book*. pp 132-133.
[21]*1997 Red Book*. pp 210-211.

duodenal and jejunal mucosa where they suck blood. The worms produce an anticoagulant that causes blood to ooze around the feeding worm, leading to blood in the stool and on-going blood loss. Clinical manifestations are complaints of hunger and nondescript abdominal pain. Severe cases can lead to anemia. Children with significant worm loads may experience growth retardation and inanition.[22]

H. nana

Hymenolepis nana (Dwarf tapeworm)

Tapeworms, or cestodes, are hermaphroditic flatworms composed of a scolex, or head, that attaches itself to the intestinal mucosa where a chain of progressively mature segments (proglottids) containing the reproductive parts produce ova. Adults live in the gut lumen of the definitive host. These worms have no gut and absorb nutrients across their integument. Larval forms encyst in the tissues of intermediate hosts. *H. nana* uses the human as both definitive and intermediate host. It is transmitted directly from hand to mouth and, less frequently, by contaminated food or water, and, possibly, by insect intermediate hosts. The unhygienic habits of children favor the prevalence of the parasites in the younger age groups. The worm's habitat is in the upper two-thirds of the ileum with a life span of several weeks.

The ability of *H. nana* to autoinoculate may lead to very heavy worm loads (as many as 2000 worms) and to cramping pain, diarrhea, nausea and vomiting, and headache. Intestinal erosions may occur. In children, heavy *H. nana* infestation may be associated with lack of appetite, abdominal pain with or without diarrhea, anorexia, vomiting, irritability, and rarely, seizures. These neurologic manifestations have been ascribed to absorption of toxic substances produced by the worms.[23]

Schistosoma

Schistosoma species

Schistosomiasis encompasses three distinct phases of clinical manifestations and on a worldwide scale is one of the most common causes of hematuria. Individuals exposed to various *Schistosoma* sp. trematodes will initially experience a pruritic papular dermatitis after penetratrion of the skin by cercariae. With non-human pathogen species, this is referred to as “swimmer’s itch,” and can be contracted from fresh and salt water. Human pathogenic species include the following: *S. mansoni, S. japonicum, S. haematobium, S. mekongi, and S. intercalatum.* These species rely on the presence of a fresh water snail as vector and have various geographic

[22]Brown, pp 119-125.
[23]Brown H, Neva F. *Basic Clinical Parasitology*. Appleton-Century-Crofts, 1983. pp 179-181.

distributions. *S. mansoni* is found mainly in tropical Africa, Latin America, the Caribbean, and the Arabian peninsula. *S. haematobium* is found mainly in Africa and the eastern Mediterranean area. *S. mekongi and japonicum* are found mainly in the Mekong River delta and in parts of China, the Philippines, and Indonesia respectively.

After skin penetration, the organism migrates through the blood stream via the lungs before ultimately lodging in the venous plexus draining the bladder (*hematobium)* or the colon. Following a period of 4-6 weeks, an acute illness (characterized by fever, malaise, cough, rash, abdominal pain, nausea, diarrhea, lymphadenopathy, and eosinophilia) ensues and is termed "Katayama fever." With heavy gastrointestinal infestations, bloody diarrhea and tender hepatomegaly may occur. Chronic disease reflects the worm burden and fibrosis with inflammation at the sites of deposited eggs. Infected individuals may be asymptomatic with light infestations. Heavy colon involvement may cause chronic bloody, mucoid diarrhea, abdominal pain, hepatosplenomegaly, ascites, and esophageal varices (due to portal hypertension). Bladder symptoms related to inflammation and fibrosis may include dysuria, terminal hematuria (microscopic or gross), secondary UTIs, and pelvic pain.

Infections by *S. mansoni* and other species affecting the GI tract are diagnosed by microscopy of concentrated stool specimens. Infections by *S. haematobium* are diagnosed by microscopy of filtered urine. Egg excretion peaks at 12-3:00 PM. Mucosal biopies may be necessary for diagnosis, and serologic testing is available.

Strongyloides

<u>*Strongyloides stercoralis*</u> (Roundworm)

S. stercoralis is usually excreted in the stool as a rhabditiform larva. The rhabditiform larva molts into an infective filariform larva (about 700 µm) after a couple of days in the soil. The filariform larvae may penetrate the human skin and migrate in the same manner as the hookworms. When larvae reach the upper part of the small intestine, they develop into adults. The rhabditiform larvae also may develop into sexually mature free-living males and females in the soil. This indirect cycle appears to be associated with the optimal environmental conditions for a free-living existence in tropical countries. Autoinfection and maintenance of the disease may occur (despite removal of the host from an endemic area) when rhabditiform larvae develop into filariform larvae in the gut lumen.[24]

[24]Brown, pp 115-119.

Most patients with strongyloidiasis are asymptomatic. A heavy worm load can lead to epigastric pain, weakness, malaise and watery diarrhea, perhaps due to an absorptive defect. Upper gastrointestinal radiographic studies may show duodenal and jejunal mucosal edema. Ulceration, and even intestinal perforation may occur. The hyperinfection syndrome can be an overwhelming systemic disease and is often fatal. Extensive migration of larvae can lead to derangement of multiple organs, secondary bacterial abscesses in the liver and other organs, and development of adult worms in the bronchial tree. Strongyloidiasis can be diagnosed by demonstrating larval forms in the stool or parasites in duodenal aspirates or biopsies and is suggested by blood tests that show hypereosinophilia of greater than 30% without obvious clinical correlation.[25]

Trichuris

Trichuris trichiura (Whipworm)

Trichuriasis is the second most common intestinal parasitosis diagnosed during the RHAP. The embryonic development of *Trichuris* takes place outside the host. An unhatched, infectious first stage larva is produced in three weeks in a warm, moist, and shaded soil environment. When the egg is ingested by humans, the activated larva escapes from the weakened egg shell in the upper small intestine and penetrates an intestinal villus. *Trichuris* lives primarily in the human cecum, but is also found in the appendix and lower ileum. Clinical manifestations are usually absent in light infections; in heavy or chronic infections, abdominal pain and tenderness, frequent blood-streaked diarrheal stools, nausea and vomiting, weight loss and anemia may occur.[26]

Common Non-Pathogenic Parasites

Blastocystis hominis (see above)
Dientamoeba fragilis (may treat with Paromomycin if symptomatic and no other etiology – see table for *Entamoeba histolytica* treatment)
Endolimax nana
Entamoeba coli
Entamoeba hartmanni
Iodamoeba butschlii

Other Common Parasites Lice, Scabies

Lice and scabies are two common arthropod parasites often found in refugee populations. MassHealth covers

[25] Jain M, DeMaria A Jr. Parasitic and tropical diseases and advice for travelers. In: Noble J, Gantz N, eds. *Primary Care and General Medicine, Second Edition*. p 4.
[26] *1997 Red Book*. pp 537-538.

both over-the-counter permethrin and lindane; in addition, if prescribed by a RHAP provider, the RHAP will reimburse sites and affiliated pharmacies for permethrin for refugees who have not yet received their MassHealth cards. Preferred treatment of lice is permethrin 1% cream rinse ("Nix")[27] with removal of nits. Scabies also should be treated but with permethrin 5% lotion ("Elimite")[27] in a single overnight application with instructions about careful hygiene and simultaneous household cleaning. Symptomatic treatment of pruritus is essential for relief from the allergic response to scabies infection, with anti-histamines and/or topical steroids for up to two weeks after permethrin treatment.

PHARMACOLOGIC TREATMENT OF PARASITIC DISEASES

Clinicians at RHAP clinical sites should become familiar with the treatment of common, uncomplicated parasitic infections. Most common among these are trichuriasis, giardiasis, intestinal amoebiasis, and ascariasis. The following tables summarize medications that are reimbursed by RHAP for the treatment of intestinal parasites. In addition to these, RHAP will reimburse for permethrin to treat scabies and lice. RHAP clinics are expected to have a relationship with a local or on-site pharmacy for obtaining anti-parasitic (and other) medications for patients in advance of the second visit. At the time of the second visit, clinicians should review dosing with patients (via an interpreter) and observe consumption of the medication (at least the first dose if part of a multi-dose course).

Note: Clinicians may consider empiric treatment of refugees with negative O & P tests in the following situations:

- Multiple family members with similar intestinal parasites. For example, if two family members have trichuriasis, the clinician may consider treating the patient with mebendazole or albendazole.

- A patient (from a country with endemic parasitoses) with a high-risk medical condition which predisposes to complications from parasitoses. For example, a patient with asthma or rheumatic disease who may be likely to be placed on steroids. In these instances, the clinician should consider empiric treatment with albendazole, 400 mg po bid for 3 days.

[27] Use of brand name is for identification purposes only and does not imply product endorsement.

RECOMMENDED AND REIMBURSED DRUGS FOR MAJOR PARASITES*

Parasite	Drug (generic/trade) ***In Order of Preference:***	Adult Dosage	Pediatric Dosage
Ascaris	Mebendazole/Vermox	500 mg once or 100mg bid x 3d.	Same
	Albendazole/Albenza	400 mg once	Same
Clonorchis	Praziquantel/Biltricide	25 mg/kg q 6° x 3 doses	Same
	Albendazole/Albenza	10 mg/kg x 7 days	Same
E. histolytica[28]	Paromomycin/Humatin	25-35 mg/kg/day ÷ tid x 7 days	Same
	Iodoquinol/Yodoxin	650 mg tid x 20 days	30-40 mg/kg/day ÷ tid x 20 days (max. 2 gm)
Giardia	Metronidazole/Flagyl	250 mg tid x 5 days	15 mg/kg/day ÷ tid x 5 d.
	Furazolidone/Furoxone	100 mg qid x 7 days	5 mg/kg/day ÷ qid x 7d.
Hookworm	Mebendazole/Vermox	500 mg once or 100mg bid x 3d.	Same
	Albendazole/Albenza	400 mg once	Same
Hymenolepis	Praziquantel/Biltricide	25 mg/kg x 1 dose	Same
Lice	Permethrin 1% cream rinse/ Nix	Apply x 1; repeat after 2 wks prn	Same
Scabies	Permethrin 5% lotion/Elimite	Apply qhs and rinse in AM once	Same
Schistosoma	Praziquantel/Biltricide	20 mg/kg bid-tid x 1 day[29]	Same
Strongyloides	Ivermectin/Stromectol[30]	200 µg/kg/day x 1-2 days	Same
	Thiabendazole/Mintezol	25 mg/kg bid x 7 days	Same
Tape worms[31]	Praziquantel/Biltricide	5-10 mg/kg x 1 dose	Same
Toxocara canis	Albendazole/Albenza	400 mg bid x 5 days	Same
	Mebendazole/Vermox	100-200 mg bid x 5 days	Same
Trichuris	Mebendazole/Vermox	500mg once or 100mg bid x 3d.	Same
	Albendazole/Albenza	400 mg once[32]	Same

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Note: Patients with *Ascaris* as well as another parasite should always be treated for *Ascaris* first due to the risk of migration of the worm.

Note: Albendazole is only available as a film-coated tablet and may not be suitable for use in young children.

Note: Paromomycin is not absorbed and may be useful for treatment of amoebiasis and giardiasis during pregnancy.

[28] Asymptomatic carriage only. Obtain consultation for symptomatic case treatment.
[29] TID dosing for *S. japonicum* and *S. mekongi*.
[30] Ivermectin not FDA approved for use in disseminated strongyloidiasis.
[31] *Diphyllobothrium latum, Taenia saginata/solium,* and *Dipylidum* only. Consult reference for others.
[32] In heavy infection, may need to treat with 400 mg bid x 3 days.

FORMULATIONS:

- Albendazole/Albenza: 200 mg film-coated tablets
- Furazolidone/Furoxone: 100 mg tablets, 50 mg/15 cc (16.67 mg/5cc) suspension
- Iodoquinol/Yodoxin: 210 and 650 mg tablets
- Ivermectin/Stromectol: 3 mg unscored and 6 mg scored tablets
- Mebendazole/Vermox: 100 mg chewable tablets
- Metronidazole/Flagyl: 250 & 500 mg tablets, 100 mg/5cc suspension (specially prepared)
- Paromomycin/Humatin: 250 mg capsules
- Permethrin/Elimite/Nix: 5% cream (60gm) /1% cream rinse (59cc)
- Praziquantel/Biltricide: 600 mg triscored tablets, 150 mg/section
- Thiabendazole/Mintezol: 500 mg chewable tablets, 500mg/5cc suspension

MAJOR SIDE EFFECTS*:

Drug	Common	Rare
Albendazole	Abd. pain, reversible alopecia, transaminase elevation, *Ascaris* migration,	Leukopenia, rash, renal toxicity
Furazolidone	Nausea, vomiting, headache, allergic reactions, hypoglycemia	Disulfiram-like reaction, MAOI interactions, hemolysis with G6PD deficiency, polyneuritis
Iodoquinol	Rash, acne, goiter, nausea, anal pruritus, diarrhea, cramps	Optic neuritis/atrophy, loss of vision, peripheral neuropathy, iodine sensitivity
Ivermectin	Mazzotti-type reaction in onchocerciasis: fever, pruritus, lymphadenopathy, headache, arthralgia	Hypotension, edema, tachycardia, possible ophthalmological changes
Mebendazole	Diarrhea, abdominal pain, *Ascaris* migration	Leukopenia, alopecia, hepatotoxicity, agranulocytosis, hypospermia
Metronidazole	Nausea, dry mouth, metallic taste, headache, GI disturbance, insomnia, vertigo, tinnitus, weakness, stomatitis, dark urine, disulfirim-like rxn., paresthesia, rash, urethritis	Seizures, encephalopathy, pseudomembranous colitis, ataxia, leukopenia, pancreatitis, peripheral neuropathy
Paromomycin	GI disturbance, eighth nerve toxicity, nephrotoxicity if IV administration, vertigo, pancreatitis	(No rare side effects listed)
Permethrin	Burning, stinging, numbness, increased pruritus, edema, erythema, rash	(No rare side effects listed)
Praziquantel	Malaise, headache, dizziness, sedation, GI upset, fever, sweating, nausea, eosinophilia, fatigue	Pruritus, rash
Thiabendazole	Nausea, vomiting, vertigo, headache, drowsiness, pruritus, leukopenia, crystalluria, rash, hallucinations and psychological reactions, visual/olfactory disturbance, erythema multiforme	Shock, tinnitus, intrahepatic cholestasis, seizures, angioneurotic edema, Stevens-Johnson Syndrome

*This table is not meant to be a definitive list of side effects and contraindications. Clinicians are responsible for familiarizing themselves with prescribed anti-parasitic drugs.

DISEASE SYNDROMES IN TRAVELERS AND REFUGEES

Diarrhea, eosinophilia, fever, mass lesions, respiratory infections, and skin lesions are the most common disease syndromes in travelers and immigrant (refugee) populations. RHAP's supplemental testing inlcudes common first line tests used in the evaluation of eosinophilia. Included in these are up to two stool microscopy tests in addition to the one in the core protocol. Supplemental testing is described in Section III-K. The following table about the etiologies of eosinophilia are from: Jain M, DeMaria, A Jr. Parasitic and tropical diseases and advice for travelers. In: *Primary Care & General Medicine, Second Edition*.[33]

CAUSES OF SIGNIFICANT PERIPHERAL BLOOD EOSINOPHILIA

Peripheral blood eosinophilia is defined as more than 450 eosinophils per cubic millimeter of blood. It occurs with allergic reactions and a number of disease processes but, on a worldwide basis, it is a common laboratory finding associated with parasitic infection.

Helminthic parasites:

Angiostrongylus cantonesis and *A. costaricensis*
Anisakiasis
Ascaris lumbricoides (invasive larval stage)
Capillaria phillippinensis
Echinococcus
Fasciolopsis buski
Filariasis
Animal hookworms
Hookworms (invasive larval stage)
Liver flukes
Paragonimus westermani
Schistosomiasis
Strongyloides stercoralis (initial inf. and autoinf.)
Toxocara species
Trichinosis
Tropical eosinophilia
(Unidentified microfilariae)

Other infections/infestations:
Pulmonary aspergillosis
Severe scabies
Wiscott-Aldrich syndrome

[33] Jain, p 35.

Allergies:
Asthma
Hay fever
Drug reactions
(Eosinophilic myalgia syndrome-tryptophan, toxic oil syndrome)

Other:
Addison's disease
Inflammatory bowel disease
Dermatitis herpetiformis
Atopic dermatitis
Toxic/chemical syndrome

Autoimmune and related disorders:
Hypereosinophilia syndrome (unknown etiology)
Polyarteritis nodosa
Necrotizing fasciitis
Eosinophilic vasculitis
Pemphigus
Mucin-secreting adenocarcinomas

Immunodeficiency states:
Hyperimmunoglobulin E with
recurrent infection

Neoplastic diseases:
Hodgkin's disease
Mycosis fungoides
Chronic myelocytic leukemia
Eosinophilic leukemia
Polycythemia vera

EVALUATION OF FEVER

The differential diagnosis of fever in a refugee can be narrowed by a good history (travel history, food/water exposure, insect bites, and animal contacts in particular), a physical examination (looking specifically for rash, lymphadenopathy and hepatosplenomegaly), and appropriate laboratory testing (particularly a CBC to identify anemia and eosinophilia). A differential diagnosis of some selected systemic febrile illnesses to consider in refugees is listed below.

DIAGNOSIS	REGION	VECTORS [ ] and CLINICAL CHARACTERISTICS { }
COMMON		
Acute respiratory infection	Worldwide	
Gastroenteritis	Worldwide	[Food, water, fecal-oral]
Enteric fever, incl. typhoid	Worldwide	[Food, water, fecal-oral]
Urinary tract infection	Worldwide	
Drug reactions	Worldwide	[Antibiotics,prophylactic agents, other] {Rash frequent}
Malaria	Tropics, mainly	[Mosquitoes] {Fever, hepatosplenomegaly}
Arboviruses	Asia, Carib., Afr.	[Mosquitoes]
Viral Hepatitis	Worldwide	{Fever, malaise, jaundice}
Hepatitis A	Worldwide	[Food, water, fecal-oral]
Hepatitis B	Worldwide, esp. Asia, Africa	[Body fluids] {Long incubation}
Hepatitis C	Worldwide	[Body fluids]
Tuberculosis	Worldwide	[Airborne, milk] {Long incubation}
STD	Worldwide	[Sexual contact]
LESS COMMON		
Filariasis	Asia, Afr., S.Amer.	[Biting insects] {Long incubation}
Measles	Worldwide	[Airborne]
Amebiasis +/- abscess	Worldwide, tropics	[Food, water, fecal-oral]
Brucellosis	Worldwide	[Milk, cheese, food, animal contact]
Listeriosis	Worldwide	[Foodborne] {Meningitis}
Leptospirosis	Worldwide	[Animals, fresh water] {Jaundice, Meningitis}
Strongyloidiasis	Tropics	[Soil contact] {Eosinophilia}
Toxoplasmosis	Worldwide	[Undercooked meat, cat feces, congenital]
RARE		
Relapsing fever	West Americas, Asia, N. Afr.	[Ticks, lice]
Hemorrhagic fevers	Worldwide	[Arthropod and non-arthropod transmitted]
Yellow fever	Tropics	[Mosquitoes] {Hepatitis}
Hemorrhagic fever with renal syndrome	Europe, Asia	[Rodent urine] {Renal impairment}
Hantavirus	Western N. Amer.	[Rodent urine] {Resp. Distress Syndrome}
Lassa fever	Africa	[Rodent excreta, person to person] {Often severe}
Other		

MALARIA[34]

Malaria, caused by the *Plasmodium sp.* parasites, is one of the most prevalent diseases in the world, with disastrous social consequences and a heavy burden on economic development. Malaria accounts for 10% to 30% of all hospital admissions worldwide. In 1987, the total cost of malaria-related health care, treatment, and lost economic productivity was estimated to be $800 million for tropical Africa alone.

The deterioration of social and economic conditions, dislocation of populations, and armed conflicts in Africa and Southeast Asia have exacerbated control of malaria. With disrupted public and clinical health services, malaria control efforts are limited, putting underserved rural populations at greater risk. In the absence of adequate health services, incomplete treatment and inappropriate use of prophylaxis increases drug resistance of the *Plasmodia* parasites.

More than 200 million cases and at least one million deaths are estimated to occur annually. Eighty percent of the cases occur in tropical Africa, and malaria is the cause of 15% to 25% of all deaths of children under the age of five. Around 800,000 children under the age of five die from malaria every year. Pregnant women who contract malaria are at risk of miscarriage and *in utero* growth retardation. Refugees from non-endemic areas may also be at risk if they have had to migrate through or into an endemic zone.

Malaria is an infection caused by protozoa of the genus *Plasmodium* in which the asexual cycle (schizogony) takes place in the red blood cells of vertebrates and the sexual cycle (sporogony) takes place in mosquitoes. The *Anopheles* mosquito is the arthropod vector for transmission outside the human host. Four *Plasmodia* species are most common in infections of human beings: *P. falciparum, P. vivax, P. ovale,* and *P. malariae*. Diagnosis relies on identification of the parasite on stained thick blood smears.

Acute illness is characterized by non-specific symptoms such as fever, malaise, myalgia, headache, photophobia, diarrhea, anorexia and nausea. Fever may last up to three weeks and gradually come in the classic cyclic paroxysms. Complications may include meningoencephalitis, arthralgia/arthritis, orchitis, shock, and respiratory symptoms (including pulmonary

[34] *1997 Red Book*; pp. 335-43.

edema). Laboratory findings include anemia, hypoglycemia, evidence of acidosis or renal failure, and leukopenia. Hepatosplenomegaly, pallor, and jaundice are common physical findings. Perinatal and congenital infections of mother and fetus may be severe. Chronic infection may result in tropical splenomegaly syndrome, characterized by hemolysis and splenomegaly with elevated titers of antiplasmodium antibodies.

Treatment should be done in consultation with an infectious disease specialist.

RESOURCES

Division of Parasitic Diseases, NCID
CDC
(404) 488-4050
www.cdc.gov/ncidod/dpd

FAX Information Service (including international travel)
CDC
(404) 332-4565

G. IMMUNIZATIONS

IMMUNIZATIONS	Please complete doses for which you have documentation and/or have given at your site.					
DTP/DtaP/TD/Td	___/__/___	___/__/___	___/__/___	___/__/___	___/__/___	___/__/___
Polio	___/__/___	___/__/___	___/__/___	___/__/___	___/__/___	___/__/___
HIB	___/__/___	___/__/___	___/__/___	___/__/___		
MMR	___/__/___	___/__/___	Measles ___/__/___	Mumps ___/__/___	Rubella ___/__/___	
Hepatitis B	___/__/___	___/__/___	___/__/___		BCG ___/__/___	
Varicella	___/__/___	___/__/___	Immune by ___exam ___history (Age of infection_____)			
Influenza	___/__/___	___/__/___	Pneumococcus ___/__/___	___/__/___	___/__/___	___/__/___

PURPOSE

To ensure that every child and adult refugee is appropriately immunized against vaccine-preventable diseases

BACKGROUND

Outbreaks of vaccine-preventable diseases occur overseas as well as in the United States. High infant mortality from vaccine preventable diseases in developing countries has led to major childhood immunization efforts worldwide. Even so, refugees come to the U.S. with high risk of under-immunization among children and adults. Highlighting this risk, the CDC has documented outbreaks of vaccine-preventable diseases such as the 1998 outbreak of imported measles in Alaska.[35]

Recommendations for child and adult immunizations change. As of this writing, in Massachusetts, hepatitis B and varicella vaccines are recommended for children and some adults. HBV vaccine is provided by the Massachusetts Immunization Program (MIP) for all children through age 18 years and is required for entry into most levels of school, including post-secondary health professions students. It is also provided for high risk adults, including refugees from endemic countries, such as those of Sub-Saharan Africa and Southeast Asia at "public provider sites" (including RHAP sites). Varicella vaccine currently is recommended for all children and most susceptible refugee adults and is being phased in as a requirement for school. Most susceptible adults are eligible for MIP supplied vaccine at public provider sites.

[35] Centers for Disease Control. Transmission of measles among a highly vaccinated school population – Anchorage, Alaska, 1998. *MMWR*. 1999;47:1109-11.

ACIP schedules and Massachusetts school entry vaccine requirements are listed in Appendix G.

The recommendations in this manual are current as of April, 2000. For updates, please contact the MIP at 617-983-6800. Note that all refugee health assessment clinic sites are expected to be enrolled in MIP.

PROGRAM REQUIREMENTS

The RHAP requires the following of providers:

1. Clinicians must evaluate immunization history and review overseas documentation.
2. Clinicians must initiate all necessary age-appropriate vaccines per ACIP adult and childhood vaccine schedules.
3. All refugees must be given a childhood or adult vaccination booklet, with completed documentation of past and RHA vaccination.
4. Clinicians should document immunity to varicella, based on exam, history or serologic testing.
5. Refugees should be instructed to bring the documentation to all medical visits including the Civil Surgeon evaluation required for change of status applications.

It is the policy of the RHAP that all clinicians must follow all adult and childhood vaccine schedules and guidelines from the MIP/ACIP.

Because the RHA process is limited to two visits separated by approximately one month, it is not expected that RHA providers will administer complete vaccine series' for refugees who need them. At a minimum, RHA providers should initiate appropriate vaccination, refer to primary care, and educate the refugee about INS/school requirements and follow-up timing.

Evaluation of immunization history through record review should determine any need for vaccination to achieve age-appropriate vaccination levels. The Advisory Committee on Immunization Practices has clear guidelines on evaluation of immunization status for individuals vaccinated outside the United States.[36] These are summarized below.

Evaluating Findings

The role of a provider during the health assessment is, first, to assess the immunization status of the patient; second, to proceed to vaccinate according to age in order to initiate or

[36]Centers for Disease Control and Prevention. General recommendations on immunization: Recommendations of the Advisory Committee on Immunization Practices (ACIP). *MMWR*. 1994;43 (No. RR-1):1-35.

complete the required primary vaccine series'; and third, to make recommendations to primary care for necessary follow-up in order to complete recommended vaccination. All refugees, especially parents of school-age children, should be educated about the importance of completing primary vaccine series' and immunization requirements for school entry, daycare attendance, and future immigration status changes.

With the exception of chicken pox, verbal or written report of a history of a disease is not considered adequate proof of immunity. Similarly, incomplete overseas documentation of vaccines may not be considered adequate for withholding vaccination. For example, a document with only a year for the vaccination date is not acceptable. Clinicians should not write phrases such as "received in home country," "up to date," or "in time" on the RHAP form or a personal vaccine document. These assertions will not be useful for school nurses or Civil Surgeon personnel guided by strict regulations. Instead, clinicians must inform refugees of the need for vaccines to assure immunity to vaccine-preventable disease and proceed with necessary immunizations per United States ACIP guidelines.

Acceptability of Vaccinations Received Outside the US

The acceptability of vaccines received in other countries to meet vaccination requirements in the United States depends on three factors:

1. Vaccine Potency

- The majority of vaccines used worldwide are from reliable local or international manufacturers, and no potency problems have been detected, with the occasional exception of tetanus toxoid and OPV vaccines.

2. Adequate Documentation of Receipt of Vaccine

- Only doses of vaccine with written documentation of the date of receipt should be accepted as valid. At a minimum, month and year must be a part of the date. Self-reported doses of vaccine without written documentation should not be accepted, and patients should be considered susceptible. All adults and children should be started on the age-appropriate immunization schedule used in the U.S.

3. Immunization Schedule

- Age at vaccination and spacing of vaccine doses must be assessed for acceptability:

DTP:
- ✓ Any dose of DTP vaccine administered at ≥ 6 weeks of age can be considered valid.
- ✓ The first 3 doses of DTP vaccine should have been separated by a minimum of 4 weeks.
- ✓ The #4 dose should have been administered no less than 6 months after the third dose.

HIB:
- ✓ Any dose of Hib vaccine administered at ≥ 6 weeks of age can be considered valid.
- ✓ Doses of Hib vaccine in the primary series should have been administered no less than 1 month apart.
- ✓ The booster dose of Hib vaccine should be administered at least 2 months after the previous dose, and should not be administered before age 15 months.

POLIO:
- ✓ Doses of OPV and IPV administered at ≥ 6 weeks of age of age can be considered valid.

This section refers to evaluation of overseas vaccination only. Current ACIP guidelines stipulate that in most circumstances, only IPV should be used in the U.S. See below for further information.

The timing of vaccine doses varies depending on the schedule used:

Sequential IPV/OPV:

At least 4 weeks are needed between doses 1, 2, and 3, although an interval of 6-8 weeks is preferred. At least 4 weeks are needed between doses 3 and 4, although an interval of ≥6 months is preferred. When IPV and OPV are used in combination, 4 doses are needed to complete the primary series.

All OPV:

At least 4 weeks are needed between doses 1, 2, 3, and 4; however, ≥6 months is preferred between doses 3 and 4. For children who received all OPV, the third dose of OPV could be administered as early as 6 months of age. A minimum of 3 doses is needed to complete the primary series.

All IPV:

At least 4 weeks are needed between doses 1, 2, 3, and 4. However, ≥6 months is preferred between doses 2 and 3 and doses 3 and 4. A minimum of 3 doses is needed to complete the primary series.

Any dose of polio vaccine administered at the above-recommended minimum intervals can be considered valid. Persons vaccinated outside the United States may need one or more additional doses of IPV to meet current immunization guidelines in the United States.

***NOTE**: Current ACIP guidelines call for the use of all-IPV vaccine schedule in the U.S. While most refugees will have received OPV overseas, clinicians should only use IPV in the U.S. except in specific circumstances described in the ACIP 2000 guidelines. See Appendix G.*

MEASLES:

- ✓ Children vaccinated against measles before their first birthday should be revaccinated at 12-15 months of age.
- ✓ Persons born in or after 1957 should have documentation of having received two doses of live measles vaccine (preferably with rubella and mumps) on or after their first birthday or other evidence of immunity. When interpreting overseas vaccine documentation, clinicians must note whether the patient received measles vaccine only or the trivalent MMR.

Written or verbal reports of a history of measles (as well as mumps and rubella) disease is not considered adequate documentation of immunity. While serologic confirmation is acceptable, RHAP should administer MMR to any refugee in need of immunization with any of the three disease components.

***NOTE**: RIHP has noted instances of RHAP clinicians incorrectly reporting overseas receipt of "MMR" on the RHAP form when the patient's overseas documentation actually reported only "MR" (measles/rubella) vaccine. This has been particularly true in the case of Vietnamese patients with IOM*

documents. This error may have occurred because RHAP clinicians did not carefully review the standard IOM vaccine document – this form has a preprinted notation of "MMR" and IOM clinicians using MR vaccine had typed a small "x" over the center "M" for mumps. The "x" may have been overlooked.

World Health Organization Expanded Program on Immunizations

Recommendations by the World Health Organization's Expanded Program on Immunizations (EPI), are generally followed by countries worldwide with minor variations in vaccine schedules, spacing of vaccine doses and documentation.

The WHO/EPI standard schedule is provided as a general reference:

WHO/EPI Infant Immunization Schedule				
AGE	VACCINE			
			Hep B: A*	Hep B: B†
Birth	BCG	OPV0	HBV1	
6 weeks	DTP1	OPV1	HBV2	HBV1
10 weeks	DTP2	OPV2		HBV2
14 weeks	DTP3	OPV3	HBV3	HBV3
9 months	Measles (Also Yellow Fever in endemic countries)			
*Scheme A is recommended in countries where newborns are at risk of perinatal hepatitis B exposure.				
†Scheme B is recommended where this risk does not exist.				

In addition, EPI recommends the incorporation of the *Haemophilus influenzae* type b (Hib) conjugate vaccine for infants in the schedule. However, many countries do not use all or some of the vaccines for the following: mumps, rubella, Hib, varicella, and hepatitis B.

VACCINES FOR CHILDREN

RHAP clinicians should follow all routine or catch-up recommendations of the ACIP/MIP(MDPH). These recommendations include immunization against hepatitis B, polio, diphtheria, tetanus, pertussis, *H. influenzae*, type B, measles, mumps, rubella, and varicella.

See Appendix G for current MDPH recommendations for routine and catch-up vaccination of children and requirements for school attendance.

While over-immunization may confer risk of side effects and increased societal monetary costs,[37] most refugees will be under-immunized for most vaccines. Given school and INS requirements, clinicians should promptly vaccinate refugee children with all needed age-appropriate vaccines.

In the case of varicella, RHAP is implementing new protocols to avoid unnecessary immunization. Such a screening strategy has been shown to be cost-effective.[38] Clinicians should assess for a reliable history of chicken pox disease. If the patient has had chicken pox, the clinician should document the approximate age of infection on the RHAP form. In addition, if the clinician notes signs of chicken pox scars on physical examination, s/he should document this on the form. In these cases, no immunization is needed. Additionally, refugees over age 6 years will be screened for anti-varicella IgG antibody levels at the first visit. This age was determined based on seroprevalance studies as noted above. Those with serologic evidence of immunity do not need immunization while those without immunity should receive the vaccine and be instructed on follow-up timing if a second dose is needed. Children age 6 years or less without a positive history or physical exam should receive the vaccine without serologic testing.

The revised RHAP form contains space for the 4 doses as schedule for immunization of infants with the newer conjugated vaccine. RHAP clinicians should implement routine pneumococcal vaccination of young children when this vaccine is distributed by the MIP.

[37] Feikema SM, Klevens RM, Washington ML, Barker L. Extraimmunization among US children. *JAMA.* 2000;283:1311-17.

[38] Figueira M, Barnett ED, Christiansen D, McNamara ER. Cost-benefit of serotesting compared with presumptive immunization for varicella in refugee children from 3 distinct geographic regions (abstract). *Pediatric Research.* 2000;47:261A.

Revised MIP recommendations for polio immunization:

All children will receive two doses of IPV at 2 & 4 months of age, followed by two doses at 12-18 months and 4-6 years. The #3 dose may be given as early as 6 months of age, but customarily is given in the second year of life. This recommendation is expected to reduce the frequency of vaccine-associated paralytic polio without creating a risk of paralytic polio caused by naturally circulating virus.

VACCINES FOR ADULTS

Td:

- ✓ All adults lacking a completed primary series of diphtheria and tetanus toxoid should be vaccinated with Td.
- ✓ The first dose of a primary series (and second if possible) should be administered during health assessment visits, after which the refugee should receive subsequent doses by a primary care provider.
- ✓ There is no need to repeat doses if the schedule for the primary series or booster doses is delayed.

For adults who have not received the primary series of at least 3 doses of DTP or TD/Td, vaccinate as follows:

Dose	*Age/Interval*	*Product*
Primary 1	---	Td
Primary 2	4 - 8 weeks after #1 dose	Td
Primary 3	6 - 12 months after #2 dose	Td
Booster	1) At age 11-12 years if $\geq$ 5 years since last dose 2) Then, every 10 years since last dose	Td

POLIO:

- ✓ Routine vaccination is not recommended for persons over age 18 years who reside in the United States except for individuals at high risk of exposure to wild-type polio virus and unimmunized adults at risk of exposure to OPV. Unimmunized adults who require vaccination should receive three doses of IPV per the above schedule for Td.

MMR:

- ✓ Adult refugees born in or after 1957 should have documentation of having received at least one dose of live measles vaccine, preferrably with mumps and rubella, on

or after their first birthday, or other evidence of immunity. If not, proceed to vaccinate them with MMR.

- ✓ MMR doses may be given at an interval of one month apart, with the first two doses of Td in the above schedule.
- ✓ When giving MMR and varicella vaccines to women of child bearing age, the patient should be advised to avoid getting pregnant for one month after vaccination.

HBV:

- ✓ Adults should be vaccinated for HBV if they fall into a high-risk category, come from an endemic country, or are a household contact. The first dose should be given whenever possible at the first visit.

INFLUENZA:

- ✓ All refugees age ≥50 years should be evaluated for influenza vaccine

PNEUMOCCOCUS:

- ✓ Current pneumococcal vaccine should be utilized for older adults and high-risk individuals of any age.

PREGNANT WOMEN

MMR and varicella are the only vaccines absolutely contraindicated during pregnancy. All other routine vaccines may be given to pregnant women who are at risk of exposure.

There is no apparent risk of adverse effects to developing fetuses when hepatitis B vaccine is administered to pregnant women. (CDC, unpublished data). The vaccine contains non-infectious HBsAg particles and should cause no risk to the fetus. Therefore, the vaccine series can be administered to women who are at risk and who test negative for hepatitis B virus infection.

Refugee women of reproductive age should be questioned about being pregnant or having intentions of getting pregnant before administering MMR or varicella vaccine and counselled as noted above. Although a theoretical risk of congenital rubella syndrome exists for fetuses of pregnant women vaccinated with MMR, no harm to a fetus has been documented in women inadvertantly vaccinated during pregnancy.

Providers assessing pregnant women should consider administering influenza vaccine to all women who would be in the second or third trimester of pregnancy during influenza

season. Pregnant women who have medical conditions that increase their risk for complications from influenza should be vaccinated before the influenza season, regardless of stage of pregnancy. Administration of influenza vaccine is considered safe at any stage of pregnancy.

Immune globulin or a specific immune globulin is indicated for pregnant women following exposure to measles, hepatitis A or B, tetanus, chickenpox, or rabies.

CONTRAINDICATIONS

History of anaphylactic or anaphylactic-like reactions to vaccine components and the presence of moderate or severe illness, with or without fever, are contraindications applicable to all vaccines. For the purposes of the RHAP, the patient's immunization series will be considered incomplete and he/she should be referred to primary care for consideration of allergen desensitization and follow-up on diagnosed illnesses.

TB TESTING AND VACCINATION

The tuberculin skin test (PPD), varicella vaccine, and MMR vaccine may be given on the same day. If MMR or varicella vaccines have been given recently, postpone the TB test until 4-6 weeks after administration of the vaccines because such vaccination may temporarily suppress tuberculin reactivity.

Immigration and Naturalization Service requirements for adjustment of status to permanent resident

As part of the 1996 federal immigration law changes, all refugees who apply for adjustment of status to permanent resident (legal permanent residence, or "green card") are required to have **written documentation** of vaccination or immunity for all vaccines recommended by the Advisory Committee on Immunization Practices (ACIP). This documentation is verified by a Civil Surgeon, a physician appointed by the INS District Office to complete medical evaluations of adjustment of status applicants. Refugees are eligible to apply for permanent residence one year after arrival in the United States. The immunization requirements apply to all refugees, not just children.

The immunization guidelines require all applicants to have documentation of immunity to, or primary vaccination against, all major vaccine-preventable diseases. The vaccines include MMR, DTP/Td, and polio, as well as Hib, hepaitits B, pneumococcus, and varicella for individuals of specific ages. In addition, the INS requires seasonal influenza vaccine for eligible individuals. Single booster doses for adults are considered incomplete and may cause delay or jeopardize granting of legal permanent residence status. Waiver from

varicella vaccination may be granted if a person meets any of three criteria: reliable history of symptomatic disease, dermatologic evidence of past disease, or serologic evidence of immunity. While waivers exist for other vaccines (such as insufficient time to complete a series, or medical contraindication), relying on the civil surgeon to request a waiver could also delay or jeopardize the refugee's application for adjustment of status if she/he fails to do so.

RESOURCES

Massachusetts Immunization Program (MIP)
Massachusetts Department of Public Health
(617) 983-6800
www.magnet.state.ma/dph/cdc/epiimm2.htm

National Immunization Program
CDC
(800)-CDC-SHOT
www.cdc.gov/nip

Vaccine Adverse Events Reporting System (VAERS)
(800) 822-7967
www.vaers.org

Immunization Action Coalition
1573 Selby Avenue
St. Paul, MN 55104
(612) 647-9009
www.immunize.org

H. SCREENING

SCREENING Wgt _____lb Hgt _____inch BP _____ Pulse _____ Head Circum (<3 yr) _____cm

	Normal	Abnormal							
Vision	_____	_____	Hct _____	Hgb _____	MCV _____	WBC _____	EOS _____%	Plt Ct _____	
Hearing	_____	_____	Pb_____	UA:Sugar____/ Protein_____/ Blood_____			Varicella titer _____Neg	_____Pos	
Dental	_____	_____	Tobacco Use _____ None _____cigarettes/day				Alcohol Use _____None _____ drinks/day		

PURPOSE

To evaluate and identify abnormalities in vital signs, visual acuity, oral health, hematological indices, and urine chemistry which may indicate underlying disease pathology as well as use of tobacco, alcohol and other drugs

PROGRAM REQUIREMENTS

Refugees should have an evaluation for gross abnormalities of vision, hearing, and dentition as well as a complete set of vital signs and routine laboratory tests of blood and urine. Vital signs should include head circumference in preschool-aged children.

VISUAL ACUITY: To test visual acuity, use the Snellen E chart. Report 20/50 or worse as abnormal.

HEARING: An otoscopic examination of the external ear, the ear canal, and the tympanic membrane should precede any auditory test.
Test for hearing grossly with the whisper test.

If you notice your patient is having difficulty understanding you or the interpreter (and this is not a language barrier) or if you observe that in the interpreter's interaction with the patient, the interpreter is having difficulty understanding the patient (and again, this is not a problem with language or dialects), consider possible hearing impairment and the need for futher evaluation.

DENTITION:	All refugees should receive an oral exam to assess for dental problems. Abnormal findings may include missing teeth, caries, significant spacing problems, poorly fitting dentures, gingivitis, signs of oral cancer, multiple fillings, etc…
WEIGHT:	Record weight in pounds
HEIGHT:	Record height in inches
BP:	Utilize appropriate size cuffs for children.
PULSE:	Required for adults and children
HEAD CIRCUM:	Required for children under 3 years old; record in centimeters.
CBC:	Required for adults and children; document hematocrit, hemoglobin, mean corpuscular volume, white blood cell count, percent eosinophils, and platelet count on the RHAP form.
LEAD:	Blood lead level is required for children < 7 years of age. Record in micrograms per deciliter.
URINALYSIS:	Required for all patients, except children who are unable to void voluntarily. Record the presence of sugar, protein, or blood as (-), (+), or (++).
VARICELLA:	Serology for anti-varicella IgG is required for all refugees age 7 years and older.
TOBACCO:	Assess use of tobacco products for all patients age 15 years and older. Record number of cigarettes smoked per day.

ALCOHOL:	Assess alcohol consumption for all patients age 15 years and older. Record number of drinks per day. (Note: Providers may need to specifically ask about beer as this is not always considered when discussing alcohol use.)

I. OTHER DIAGNOSES / MEDICATIONS / REFERRALS / HEALTH EDUCATION

OTHER DIAGNOSES	**MEDICATIONS PRESCRIBED**	**HEALTH EDUCATION**
1._____	1._____	Vaccines ____ Access to Care ___
2._____	2._____	Primary Care ____ Insurance ___
3._____	3._____	Oral Health ____ Emergencies ___
4._____	4._____	Other _____

COMMENTS/REFERRALS:

Primary Care Referral Site_____ Clinician Name _____ PC Appt Date ___/__/___
Other Referrals_____

PURPOSE

To record abnormal or significant findings and diagnoses, medications prescribed, referrals for primary care and other appointments, and health education content

DOCUMENTATION

OTHER DIAGNOSES

Record diagnoses other than those listed elsewhere in the health assessment form under "Other Diagnoses".

Do not record normal findings or non-specific symptoms which do not strongly suggest a significant clinical diagnosis.

Record the diagnosis (as opposed to the symptoms which led to the diagnosis) and any appropriate referrals, follow-up, or interventions needed; i.e., record your assessment and plan and not your subjective and objective findings. Examples:

1) Record *"Probable peptic ulcer disease"* rather than "chronic epigastric pain, dyspepsia, nocturnal exacerbation;"
2) Record *"Upper respiratory infection"* rather than "3 day history of clear rhinorrhea and occasional cough."

An exception to recording symptoms would be a symptom that is considered a diagnosis by itself. An example of this is "headaches." Even in this case, however, it is preferable to use a more specific diagnosis, such as "migraine headaches."

MEDICATIONS PRESCRIBED

Record medications that are prescribed or dispensed for the treatment of parasitic infections and other conditions. For example, if a clinician diagnoses otitis media and prescribes amoxicillin, he/she should record the dose,

frequency, and duration of treatment on the core form. Treatment for conditions identified through supplemental tests are recorded on the Supplemental Form.

Whenever possible, all prescriptions reimbursed by the RHAP should be pre-filled and available at the second visit for review with the health assessment patient. This is required for anti-parasitic medications prescribed to treat pathological parasites identified in the O & P. It is recommended that, as appropriate, the first dose be taken during the second visit.

COMMENTS/REFERRALS

Primary Care Referral

All refugees should be referred to a primary care provider.

All providers should schedule a primary care appointment for refugees with their consent either at the RHAP site or elsewhere. The name of the primary care provider (and/or clinic site), the date, and the time should be noted on the health assessment form.

Many refugees with chronic conditions are likely to be aware that they have a health problem or even have had it diagnosed or treated in the past. Refugees will often be relieved to receive medical care for conditions which they have neglected, often knowingly because of the disruption to their lives which caused them to flee their home countries.

Due to INS requirements for immunization documentation with applications for legal permanent residence, all refugees will need to have documentation of completed primary series' for all vaccines currently recommended in the U.S. In addition to initiating vaccination during the health assessment, all refugees are likely to need follow-up for vaccination which can be completed by primary care providers. Refugee and Immigrant Health Program (DPH) outreach staff are available to assist refugees in keeping primary care and other referral appointments.

Other Referrals

Make referrals, as appropriate, for urgent matters.

The decision to make a referral is up to the RHAP provider. Providers must use their judgment as to what constitutes an "urgent" or "emergent" matter. For medical conditions,

referrals should be made if the condition poses a threat to life or a serious health risk which could result in permanent damage. For example, it is common to encounter refugees with chronic ear infections and perforated tympanic membranes. Given the risks of suppurative complications, especially in younger children, and hearing impairment, it would be appropriate to begin a course of antibiotics and refer the patient to an otolaryngologist for evaluation rather than leave the referral up to the primary care physician, a decision which could add up to several months to the process, an unacceptable delay for a child in a developmental phase of rapid language acquisition or entering school, or an adult trying to learn English and enter the job market.

Make referrals, as appropriate, for other medical, dental and support services.

Instruct and refer refugees as appropriate to the following services:

- Dental care services
- Appropriate medical sub-specialty referrals for initiation or continuation of care of identified medical conditions
- Local community resources, such as WIC, the Special Supplemental Nutrition Program for Women, Infants, and Children
- Educational evaluations: Early Intervention Programs for children with, or at risk of, developmental delay, up to age 2 years and 9 months, after which age, a referral should be made to local public schools for a Chapter 766/CORE evaluation for special educational services
- Mental health services

NOTE: *All refugees who are pregnant or lactating women or children age 5 years or less will generally be eligible for WIC (which is fully-funded in Massachusetts and as such has no waiting list even though it is not an entitlement) and should be referred, if not already referred by the VOLAG. Refugee and Immigrant Health Program outreach educators and VOLAG case managers may be able to assist with such referrals.*

In considering child development issues, the RHAP encourages providers to be aggressive. While a refugee child's culture may play a great role in determining developmental stage, it must be remembered that the child will

now be measured against and expected to meet developmental standards of the US. For example, it would be appropriate in the case of a 24 month old who is not talking to refer the child for audiologic testing and an Early Intervention program. Refugee children are at increased risk of school failure and mental health issues; therefore, interventions aimed at expediting child development or educational interventions to maximize school readiness and addressing mental health issues should be prioritized.

MassHealth

Most refugees will have their MassHealth cards by the time of a referral appointment, and concerns about coverage should not prevent referrals.

Refugees who have not received their MassHealth cards should be eligible for MassHealth either retroactively to the date of application (usually within the first week of resettlement) or through a temporary number. Additionally, individuals with a pending MassHealth application remain eligible for free health care under the state's uncompensated care program.

Mental Health

Providers can obtain information about multicultural mental health services, particularly for immigrants and refugees, from:

Office of Multicultural Affairs
Massachusetts Department of Mental Health
25 Staniford Street
Boston, MA 02114

The phone number is 617-626-8134.

Health Education

Detailed information on health education that is considered integral to the health assessment is found in Section III-J.

Record (by check-off) topics that are reviewed with refugee patients.

J. HEALTH EDUCATION

PURPOSE

To provide introductory information about key health-related topics relevant to newly arriving refugees at the time of the refugee health assessment

BACKGROUND

Studies in the United States have shown that use of designated primary care as the point of first contact for illnesses, as well as the utilization of preventive care, is associated with fewer acute care visits and lower cost. Refugees arriving in the United States often have an array of complex health problems varying from acute to untreated chronic. Linking the patient to comprehensive primary care services should be a priority. Refugee health education is a key component of the health assessment as these are the first encounters a refugee has with the US health care system. Clinicians must have a health education plan that spans both visits. Clinicians should can consider both individual or group education, videos with discussion, or other models of education which can best be implemented at their clinic.

PROGRAM REQUIREMENTS

Educational content of the health assessment should include, but not be limited to, the topics that are elaborated below:

1. Introduction to the health care system of the U.S.

The U.S. Department of Health and Human Services, in the eyes of many newcomers, would be the equivalent of a ministry of health in other countries. In most other countries, however, the government is nominally responsible for individual health care and the major funder of health services. Refugees should be informed of their responsibilities regarding their own health status and utilization of care, as well as the commercial, employment-based nature of health care financing in the U.S. This should include an introduction to MassHealth coverage (provided to refugees for eight months), how to use primary care and emergency services, and accessing dental care.

2. Primary care and health insurance

The concept of primary care and prevention may be new to refugees, many of whom come from areas where health services focus on treatment of acute conditions. Clinicians should introduce the concept of preventive medicine, primary care clinicians, and the function of such a clinician.

MassHealth, for which all refugees are eligible for 8 months, requires designation of a managed care provider (primary care clinician or HMO).

Reinforce prevention messages in the context of the importance of primary health care, such as immunizations and early and periodic screening for children and check-ups for adults. Many refugees may never have had routine preventive screening or child development assessments. In particular, many refugee women may never have had gynecological and other women's health screening such as pap smears, mammography, or explanation of breast self-examination.

3. Access to health services

Providers should orient refugees to the logistics of office-based health care services in the US. Topics may include the use of phone systems, scheduling appointments, off-hours coverage, missed appointments, and urgent care systems.

One of the most significant problems a refugee may encounter arriving in the U.S. is communication. Advise refugees on basic skills needed to contact you or other physicians:

- Calling the clinic for questions or to make/change appointments
- Requesting interpreter assistance
- How to use voice mail and leave messages
- Typical hours of operation

4. Insurance / MassHealth

Educational content should include a brief introduction to the role of insurance in paying for health services and pharmaceuticals. Discussion should emphasize the role of the primary care clinician, coverage of many over-the-counter medications, dental care, the use of the MassHealth card, and how to designate or change the primary care clinician.

Clinicians should provide basic information, as outlined below, to the refugee patient.

Medicare: Covers health care services for most people aged 65 years and older who have paid into the system and for some disabled people. **Medicaid/MassHealth:** Covers health care services for low-income people (defined by each state);

includes pharmaceutical and dental coverage. Coverage may be broad for individual cases, due to requirements to reimburse any treatment necessary for conditions diagnosed as part of screening for children. **Private Health Insurance**: In Massachusetts, there are many different private insurance and managed care companies such as Harvard Pilgrim Health Care (HPHC), Blue Cross Blue Shield (BCBS), Tufts Health Plan, US Health Care, Neighborhood Health Plan, Fallon Health Plan, etc… While each insurance plan is different, Massachusetts is one of the leading states in managed care enrollment. Managed care plans usually require the choice of a primary care physician from a panel of covered physicians. These health plans will cover only designated services of the doctor that the patient has chosen and physician-authorized referrals. If the patient sees other, unauthorized doctors, he/she may have to pay a bill. Co-payments should also be explained to the refugee.

All new Medicaid and some Medicare enrollees are being put into managed care programs such as the Primary Care Clinician Program or contracted commercial HMO's. All refugees must understand the gatekeeper concept of managed health care in Massachusetts.

5. Immunizations

An important issue for refugees of all ages is vaccine requirements for school attendance and adjustment of immigration status. Refugees are required to have documentation of mandatory vaccination. Children must have documentation to meet school entry requirements. All refugees must have documentation to meet immigration adjustment of status requirements. These requirements stipulate that a refugee must have written documentation of immunity to most vaccine-preventable diseases through a full primary series of these vaccines.

With current regulations governing school attendance and immigration status adjustment as they are, clinicians should advise refugees of the need to repeat vaccines for which documentation is not available and begin this process during the health assessment. As noted earlier, RHAP requires clinicians to review vaccine needs of all refugees, initiate vaccines per ACIP guidelines, and complete personal vaccine records. Part of this process should include discussion of these requirements with refugees as well as follow-up needs,

vaccine safety and the importance of vaccines in disease prevention.

6. Emergency services and 911

Refugees should be provided with information on access to and appropriate use of emergency services. Discussion should include the need for primary care clinician authorization for emergency use whenever possible except for life-threatening emergencies. Instruct refugees about the **911** phone number in case of an emergency. Define emergency vs. non-emergency situations, and encourage patients to avoid the utilization of emergency rooms for non-emergency conditions. In addition, clinicians should be aware that refugees may turn to RHA clinicians for emergency or acute care beyond the scope of the RHA. Clinicians and staff should not refuse care in these situations, but document and bill for services as for other MassHealth patients. It is appropriate to refer refugee patients to other primary care or emergency services when the situation permits such a delay in care.

7. Oral health / dental care

Forty-five percent of all refugees, and nearly 2/3 of all refugee children, regardless of country of origin or age, have significant dental disease. Clinicians are expected to assess dental history and dental care practices. Education should emphasize personal hygiene, prevention of baby bottle caries, use of fluoridated water and toothpaste, and regular dental care. Refugees should be advised to seek dental consultation as soon as possible and offered information on clinics that accept MassHealth.

8. Give clear instructions on medications

Many refugees may be used to being able to purchase medications like antibiotics easily without prescriptions. A brief introduction to the following should be attempted, especially if you are prescribing medication for the patient:

- Over the counter medications vs. doctor-prescribed medications
- To continue medication as prescribed by the doctor for the full course prescribed
- Not to take additional medicines without checking with the doctor first

- Insurance coverage of medications (don't forget MassHealth and NHP cover a wide array of over-the-counter medications)
- To discard unused prescription medications after an acute illness and not to share prescription medication

9. Provide general health education

If appropriate in the context of the clinical encounter, clinicians should consider discussing any relevant topics, such as those below:

- Mental health: depression, homesickness, substance abuse, psychological trauma; coping with emotional stress
- Safety: accident prevention, mandatory child seats in cars, lead paint, supervision of children
- Nutritional problems: changing diets, loss of appetite, overweight/obesity
- Domestic violence: reduction, prevention, Massachusetts law
- Child neglect/child abuse: children protection laws, corporal punishment, female genital mutilation

Complete paperwork

All school-aged refugee children will need Massachusetts school health forms completed. Use any standardized form available, as many families may not have registered their children for school by the time of the RHA or may not have brought a form. Clinicians without such forms at their site should contact the RIHP for copies.

Pregnant or lactating women and children up to age 5 years should be given a WIC medical form (and instructions on how to enroll in the WIC program, if they have not already done so).

All refugees should be given a personal vaccine record booklet that documents vaccines from abroad as well as those given at the RHA.

All refugees should be given the green copy of their RHA form and advised to bring it to their first primary care appointment.

Documentation

Health education content must be documented in the patient record.

L. ASYLEES

PURPOSE

To provide comprehensive health assessment for individuals who have been approved for asylum in the U.S.

BACKGROUND

Policy changes in June 2000 by the federal Office of Refugee Resettlement permit asylees to be eligible for refugee benefits and services, including refugee health assessments, beginning on the date asylum is granted. Consequently, physicians performing refugee health assessments as part of the Refugee Health Assessment Program (RHAP) may begin to see asylees referred for evaluation.

In the past, while recipients of political asylum were technically eligible for refugee health screening, Federal regulations mandate initiation of such assessments within 90 days of arrival in the U.S. Thus, the vast majority of asylees did not receive evaluations because they had been in the U.S. for many months or even years by the time their asylum claim was decided. In fact, most asylees also have been unable to receive cash assistance or Medicaid because the eligibility of low-income asylees for these benefits is limited to the first 8 months after arrival in the U.S.

The usual process for asylees to access refugee services will be as follows:

- Area immigration lawyers will initiate referrals for clients by forwarding client information to the Massachusetts Office for Refugees and Immigrants (ORI).
- ORI will assign the asylee to an area resettlement agency (VOLAG) for case management services.
- VOLAGs will refer asylees, as appropriate, for health assessment services.

Because of societal marginalization of asylees, most asylees will not have a regular source of medical care. As is done for refugees, RHAP clinicians should assess the asylee patient for access to and utilization of primary care. The primary care physician will be able to follow-up on neglected health needs as well as those newly identified during the RHAP. Current asylum recipients may have been in the country for many years. However, as the INS clears pending applications, future recipients will have to have met the one-year application filing deadline. Thus, they will have been in the U.S. for much less time than past asylees.

In many ways, the health status of asylees well resemble that of refugees. Asylees, like refugees, come to the U.S. often after having experienced significant psychological and physical

trauma, particularly individual torture and rape victimization. At the time of the health assessment, shortly after arrival, most refugees are not experiencing symptoms of acute psychological distress. In contrast, psychological issues among asylees may be central in the struggles of their daily lives and compounded by the societal marginalization of asylum applicants. Paramount in this process is the lack of access to publicly-funded benefits and, for the vast majority of asylum applicants, the inability to work in any meaningful job with benefits like health insurance.

Like refugees, it is expected that asylees will have high prevalences of latent tuberculosis infection, dental caries, eosinophilia (as an indicator of parasitic infections), anemia, chronic diseases such as diabetes and hypertension, and underimmunization. Some will also come from countries with endemic hepatitis B, HIV or parasitoses. While some parasitoses are typically self-limited, others such as schistosomiasis and strongyloidiasis may present particular long-term health risks to the patient. Parasitic infections may persist for years through transmission within refugee communities if not properly identified and treated.

Lastly, like the situation facing refugees, a political asylum grant is typically only a stop on the path to citizenship. The next stop is the application for permanent residence. This usually takes place one year after receipt of asylum, or for a newly arrived refugee, one year after arrival. The asylee will need documentation of age-appropriate vaccination in compliance with government health guidelines (ACIP vaccine schedules). The RHAP affords an excellent opportunity for the asylee to have his/her vaccine status reviewed and to initiate any necessary vaccines.

Derivative Asylees

In some cases, an approved asylee's immediate family members are not in the U.S. and enter later through the visa process. These family members are referred to as "derivative asylees" because they are part of the original asylum application. Derivative asylees are newly arrived in the U.S. at the time of referral for health assessment. They will have completed an overseas visa medical examination prior to entry.

PROGRAM REQUIREMENTS / RECOMMENDATIONS

The health assessment is highly recommended for asylees who have been in the U.S. for less than 5 years, and RIHP is asking VOLAGs to strongly encourage asylees to undergo the assessment.

For those asylees in the U.S. for 5 or more years, the health assessment process may be highly beneficial for many asylees and should be offered based on the individual health needs and health care experiences of the asylee.

The health assessment for asylees will be quite similar to that undertaken for refugees. Providers do need to be cognizant of issues that may be unique to asylees and to the needs that asylees may have for assessment and linkage with health services.

1. Complete demographic information.

The "DATE OF ENTRY" is the date of the asylum grant.

Write "ASYLEE" at the top of the form.

All other demographic information is collected as it is for refugees.

2. Review any available health documents.

While most asylees will not have undergone an overseas health evaluation, many will have had some kind of medical or psychological evaluation in support of their legal case. Similarly to reviewing the OF-157 overseas health screening form, RHAP clinicians should ask the asylee if they have any documentation of the findings from these assessments, often done *pro bono* in private settings. In most cases, such evaluations are not going to include screening tests as are conducted during refugee health assessment.

3. Perform history and physical examination

See Section III-C. As noted above, many asylees will have histories of torture and/or rape.

4. Perform screening and evaluation, including
   - PPD for TB infection
   - Complete blood counts
   - Stool microscopy for ova and parasites
   - Urinalysis
   - Varicella (age $\geq$7 years) and hepatitis B serologies
   - Vision, hearing and dental screening
   - Lead testing (for young children)

5. Evaluate immunization history and initiate age-appropriate vaccination.

As noted above and in the Immunization Section of this manual (III-G), documentation of immunizations is required at the time an individual applies to adjust their status to permanent resident. Educate the asylee about this and instruct them to bring their immunization record to future primary care visits so that it may be updated, as needed.

6. Facilitate linkage with primary health care or forward findings to established primary health care provider.

For those asylees with only episodic care in the past, the referral to and linkage with primary care can be a significant benefit of the health assessment. Although most asylees should be eligible for MassHealth, even if only for eight months, others may not meet income eligibility standards. In this case, explanation about primary care sites that accept free care or offer sliding scales is important.

For those refugees with a current primary care provider, document this on the health assessment form. Forward findings from the assessment with recommendations for follow-up in primary care.

7. Provide health education.

Health education for asylees should incorporate any unique needs. Not all asylees will be Medicaid-eligible and therefore may need information on health care options for both insured and uninsured individuals, depending on the individual's situation.

In general, the health education topics covered with refugees are relevant for asylees.

8. Order supplemental tests, as appropriate

Supplemental tests are an option for the clinician, as with refugee patients. Note that asylees will not have had overseas screening. RPR and HIV tests are available as supplemental tests if they are clinically indicated.